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Editor :
SUTINDER SINGH

Indian Science in International Perspective

Pawan Sikka*

Science in India is a matter of continuity and change. Even before Independence, the national movement, as represented by the Indian National Congress, realising the role of science & technology (S&T) in industrial growth formed the National Planning Committee comprising the then leading scientists, to prepare a programme of development of India. The political leadership cultivated cordial relations with the then leaders of science in the country for the effective development of science and technology towards the nation building. This resulted in the evolution of science policy for effective management of natural and human resources and utilization of instruments like education, science and technology, research and development (R&D) in industry etc, for the prosperity and economic growth of the country. The evolution of science policy in modern India resulted from the following three factors :

- i) There were major efforts by the Gandhian movement to develop cottage and small scale industries, rural development using locally available materials and the available skills to better the living conditions of the poor people

The Gandhian movement was promoted by the Khadi and Village Industries Commission and the voluntary agencies.

- ii) The Government of India under the leadership of Nehru embarked on the expansion of the educational system and the creation of R&D system resulting in the generation of so called 3rd largest, qualified and trained S&T manpower.

Nehruvian model created a chain of national R&D laboratories, resulting in the establishment of a very wide science base, in the country

All efforts were made by the Government of India to develop science in India while industry developed on its own and very little efforts were made to nurture the technology base in the country.

- iii) The Indian industrialists prepared a plan for the industrial development of the country. Even the government and the new comers established the heavy industries. This was built around imported technology.

All the above three streams, after independence gained momentum. However, one significant feature was that the three approaches were integrated in an overall approach. Nehru adopted a strategy for the development of mixed economy.

The sole objective of science policy formulation and planning in India has been to engage the S&T system in setting up a comprehensive

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programme of permeating science with social action and vice-versa and promoting self confidence in S&T capabilities in the country. Thus during the past 50 years, India achieved self-reliance in agriculture and excelled in atomic energy, space science, oceanic areas, etc besides making progress in several industrial sectors. India has already acquired strength in software and electronics. There has been a major development in the area of professional electronic equipment and system required for communication, civil aviation, defence, etc. Wide range of capabilities have also been built up in major export oriented areas like auto-components and engineering, chemicals, polymers and their auxiliary products, food processing, gems and jewellery, handicrafts, jute and leather, minerals and related industries, textiles and garments, etc.

Foreign Model

The development of S&T in India has been in relation to the great advances that have taken place in S&T abroad and to the needs of Indian society. These efforts led to the capacity building in many areas of S&T towards achieving self-reliance in the country ranging from development of bullock cart to super conductivity.

The blueprints for the development of R&D facilities in India and the organisation scheme followed the British pattern, in the earlier period after independence, resulting thereby in the establishment of CSIR, ICAR, ICMR and a chain of national labs in industrial, agricultural and medical fields in India. Later, the American pattern for S&T infrastructure was adopted while setting up of TIFR, IITs, etc. Even at one stage, in early eighties, Chinese model of development were thought of making reference to and defending such models as :

- * Walking on two legs
- * Small is beautiful
- * Intermediate and Appropriate Technologies
- * Learning from the masses
- * Grassroot scientists, and
- * Barefoot doctors.

This necessitated the need of linking the application of S&T to the social needs of the society. The experience of India in S&T planning for social and economic development is one of the most noteworthy examples that science policy does work. A well-thought out science policy based on :

- far-sighted and imaginative approach to S&T planning,

- intuitively correct responses to advancements concerning frontier areas of science,
- Indian love of learning and search for knowledge in a secular atmosphere and under conditions of free inquiry,
- faith and pride in science at the highest political and bureaucratic levels, and
- broad and general support to the scientific enterprise as a whole

has been the cornerstone of the Indian model of techno-economic development planning.

Future Perspectives

Science in India is now at the cross roads of crystallisation. Self reliance as a motto has been achieved in many sectors of the Indian economy. The present global scenario demands targetting beyond self-reliance. Though India has adopted a two pronged approach of making some and buying some i.e. indigenous development and acquisition of technology from abroad, yet one should remain alert that the liberal import of technology under GATT should not weaken the technology base in India. Now, the question arises that from here, where the science in India is going to be (*Quo Vadis*)?

Efforts are now required to develop world class potential in

- a) Non-conventional sectors as well as spin off technologies from space, defence and atomic energy sectors;
- b) Communication and information highway;
- c) Biodiversity and modern biotechnology, genetic engineering, etc.
- d) Emerging eco-friendly (green) technologies.

The Science Policy planners, in this context, will face critical issues in 21st century, viz :

- How long India will keep on pursuing the science model i.e. development of only science in the country?
- When will the solid foundation of science base will accelerate or crystallise?
- When the R&D will have linkages with academic and industrial sectors?
- How much to reorient the technical education from the conventional one to meet with the global scenarios?
- What should be the relation between generation and utilisation of S&T manpower?

- How to consolidate the strength of S&T institutions?
- When and where to prioritize in science, technology and industry vis-a-vis R&D funding?
- How Indian science policies will react to the regimes of patent and GATT?
- Where lies the strength of India's science in view of patents, natural resources, etc?
- When we will innovate after absorbing the imported technology?
- What strategies would be considered for achieving excellence, atleast in a few areas, in the industrial world? etc.

The successful implementation of a science policy means cultivating scientific and technological developments in such a manner as to account for the unique features of S&T and to harness them simultaneously for the society towards the improvement in the quality of life of the people. There is a need of evolving a comprehensive science and technology policy for the overall development of S&T in India. The growth of S&T would become meaningful only when it is related to the social and economic needs of the country and takes into account the future national development plan.

These are some of the questions which need to develop towards a vision of science for the 21st century. Given the very substantial capacities and capabilities that the Indian S&T system has now acquired, the next decade should be a fruitful one for the application of science and technology towards making India a strong nation in the world. Let us strengthen science, both basic and applied, in India for creating a strong technology base towards generating industrial growth in the country and excelling in the world market in 21st century.

[The views expressed are the personal views of the author and in no way reflect those of the organisation to which he belongs.]

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DIRECTOR

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Admission to Engineering Colleges in Tamil Nadu Rethinking the Procedure

S. Muthukumaran*

In Tamil Nadu admissions to engineering colleges have been regulated through a common entrance test since 1984. Even earlier, the admission process was centralised. Centralisation of admission to engineering colleges was considered necessary to avoid inconvenience to the students, as in the absence of centralisation, a student has to apply to each one of the several colleges separately.

It is understood that this year about 80,000 candidates, applied for writing the entrance tests in Mathematics, Physics and Chemistry. But of this about 70,000 appeared for the test. Finally only about 26,000 applied for admission to the Engineering Colleges. The number of seats available is about 20,000. Therefore almost all who are eligible and who applied for admission have been offered admission.

The bane of our society is that we tend to accumulate all old rules, procedures, conventions without any review whatsoever. Thus we end up with an ever increasing complication of the system, making life difficult for the law abiding citizen. We have not reviewed in the present context, whether a common entrance test is required? Whether a centralised admission procedure is relevant? Whether an elaborate reservation system in admissions is justified?

Centralised Admission

If the number of applicants exceeds the number of seats available and the admissions are being made by the individual institutions, the applicants in their anxiety to get admission, rush to every institution for admission. This would cause unnecessary hardship. In order to save the applicants and their parents this avoidable hardship, a centralised system of admission to engineering colleges in the State was introduced. The centralised system when introduced was helpful to the aspirants. But at present when adequate opportunities exist and all those who are eligible and apply for admission are offered admission, why should the Government intervene in admissions? Why are the courts insisting

on admission to the engineering colleges according to a common merit list? Under the presently existing circumstances, if a management wishes to admit educationally backward students in order to help them in their studies, why should the Government and the courts intervene to put into that college educationally better students?

We know from experience, if the facilities and teaching are better in an institution, the best students wish to enter that institution. But it is the educationally backward student who is in need of better teachers. Thus, from the point of view of the needs of the students, the present system is not doing social justice.

At a particular time when the facilities for engineering education were limited, utilising the same for the benefit of the best students was justified. Today when the facilities are adequate to meet the demand, the facilities are to be thrown open based on needs i.e. a student who needs closer supervision or more attention must be admitted where such facilities exist; a student who needs the support facilities rather than supervision or teaching must be admitted to an institution where facilities exist for self study. Hence in the present context when scarcity does not exist, admission based upon common merit list is not only irrelevant but also a burden on all those concerned and it is doing more harm than good. As we all know, admissions continue till October or November even though the academic session has commenced in July. Students get admitted in one engineering college, then get transfer to another college and some of our best students are wasting several months of their precious life. This wastage has been thrust on these students by the present central admission procedure. Decentralisation will lead to most of the students applying to the nearby colleges and therefore the admissions would be over within a reasonable time. Those who desire to join in prestigious institutions, will also know what should be their grade to get into those institutions. Therefore, these prestigious institutions also will not receive too many applications. We know that in prestigious institu-

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tions like the Anna University even the first semester examinations are over before the admissions are closed in some of the other Universities. It is time we see the changed circumstances and give up this centralised admission procedure, which was introduced under different set of circumstances.

Reservations

The main reason for reservations in admission is : certain socially and economically disadvantaged persons do not get admission in a highly competitive and scarcity ridden world. Presently, a number of private entrepreneurs are coming forward to establish educational institutions and opportunities for admission to engineering courses are adequate. Therefore, we find there are no court cases about admission to engineering colleges whereas every year there are a number of court cases in respect of admission to medical colleges where the number of seats are inadequate. In respect of engineering colleges reservation is needed only for admission to some of the prestigious and aided institutions, as in the absence of reservation many of the socially and economically backward students may not be able to enter those institutions. As the attraction to the aided institutions is mainly due to the heavy indirect subsidy provided by the government to those joining these institutions through a low subsidised fees, if the government provides the subsidy directly to those who deserve these rather than to the institutions, then there will be no need to reserve seats, the government may have to only select students for providing the aid from among those who join the course. Thus under the present circumstances an elaborate system of reservation of seats in admission to engineering colleges is not justified.

Admission Procedure of Tamil Nadu

The procedure for admission to engineering colleges of Tamil Nadu suffers from some additional irrelevance also. Presently the merit list is prepared based on the marks obtained in Mathematics, Physics and Chemistry in the 12th standard and the marks obtained in the entrance test. While adding the various marks, a specified weightage is adopted. The syllabus for the entrance test is the same as that for the 12th standard. But the syllabus for the engineering course is prepared presuming that the candidate knows Mathematics, Physics and Chemistry taught in all the classes upto and including the 12th standard. Therefore the suitability of the candidate can be judged only by testing the knowledge

of the individual in Mathematics, Physics and Chemistry subjects of all standards upto and including the 12th standard. A perusal of the syllabus of the 12th standard, will clearly indicate that to study the Mathematics, Physics and Chemistry of the 12th standard, one need not be conversant with all that is included in lower classes especially the 11th standard. In other words, a test based on the syllabus of the 12th standard of the Tamil Nadu State does not truly reflect the merit of the individual to join/pursue the engineering degree courses. As the marks obtained in the entrance test and the marks obtained in the 12th standard alone are being taken into consideration for preparing the merit list, this list does not truly represent the merit of the candidate to pursue the engineering course.

Good Procedure for Admission

Any procedure for admission if it is to be good, ought to be based on the following assumptions:

- *the students are reliable
- *the teachers are dependable
- *the management of the colleges are sincere.

A university must register on its rolls only reliable students, approve the qualifications of dependable teachers and affiliate colleges managed by sincere persons.

If students are not reliable, the teachers are not dependable and the managements of the colleges are not sincere, then whatever may be the rules that may be framed and strictly enforced, the system will not deliver worthy results. Our present procedure for admission is based on the assumption that the students seeking admission will generally indulge in malpractices, if they are not watched, the teachers are undependable and given a chance they will admit students not based on merits but based on other considerations; and the managements of the colleges are not sincere and given the power to admit the students by themselves, they will adopt unfair practices in admission. The present procedure based on such undesirable foundations naturally breeds, malpractices among the students, erratic decision making by the teachers and cunningness among the managements to circumvent all the rules. Therefore, there is an urgent need to devise a procedure based on the right assumptions listed earlier.

Fees in the Unaided Colleges

At present, 50% of the seats in unaided colleges (known as self financial colleges) are classified as free seats and the students admitted to these seats are to pay a low fees. The other seats are called payment seats. The students admitted to these payment seats have to pay a fees that is many times the fees levied for the students joining free seats. The fees for payment seats are fixed in such a way as to cover the expenses for those seats as well as the subsidy for the free seats. This is both unfair and unethical. A student could be asked to pay for the expenses incurred to educate him. But what is the rationale in asking him to subsidise the education of another student? If it is considered by the government that some students are to be given subsidy, it is for the government to provide the subsidy and not forcibly extract it from another student.

A Suggested Procedure

There are more than seventy engineering colleges in the Tamil Nadu State. They are spread all over the State. Most of the students who seek admission to these colleges would prefer to study in the colleges near their residence. Only a few may prefer particular colleges for certain reasons such as the following: the course of their choice is available only in that college and not in the college near their residence. Therefore, a decentralised procedure of admission may be convenient to all concerned.

The admission to colleges may preferably be decided taking into consideration the performance of the candidate in the last four years of study, i.e. in 9th, 10th, 11th and 12th standards. Just as we used to have sometime ago the S.S.L.C. book, a record for four years of study may have to be kept. This record will give a better picture of the performance of the candidate. Entrance test if it is to be conducted at all, must be based on a syllabus covering the subjects of Mathematics, Physics and Chemistry taught in the 9th, 10th, 11th and 12th standards.

The university with which the student is to register or to which the college is affiliated, may fix the general guidelines for admission. The college has to openly announce its procedure which will be generally conforming to the guidelines issued by the university. The admissions are to be left to the individual institutions.

The government may not give aid to any institution. It may dispense with the distinction of free seats and payment seats. It may levy a fees in its engineering colleges to reasonably meet the cost of education. As the government is interested in subsidising the education of a certain number of students belonging to various communities it may announce in advance the amount and number of scholarships available for each of the communities and the manner of selection of the recipients of the scholarships. After the admissions are over, the students may be required to apply for scholarships. The government may take early steps to identify the candidates who are to get the scholarships and release the scholarships promptly. Based on the experience in earlier years, the students would know whether they are likely to be eligible for scholarships or not.

The procedure outlined above may not cause any avoidable hardships to the candidates. As the system is open, there may not be scope for exploitation. The procedure will lead to completion of admission in a reasonable time and it would avoid wastage of the precious time of our young ones.

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Total Quality Management in Self Financed Technical Institutions

Some Strategies for Implementation

C. Subba Rao*
N. Kumara Swamy**

It is a well known fact that technical education in India at present is getting diluted at an alarming rate. Upto late 70s there were only a few Engineering colleges in each state (except one) imparting technical education with good standards. In a period of about 20 years, there has been a sudden and exponential growth of technical institutions (Engineering Colleges) in the country. This is mainly due to lack of long range policy and forecasting of the technical manpower needs of the country in future. The demand and supply position of engineers has to be scientifically assessed from year to year. Depending upon demand for engineers by the different sectors of economy, institutions have to be planned and established.

The industrial growth and productivity in any country is directly related to the quality of engineers coming out of the technical institutions. The quality of engineers in turn has a direct bearing upon quality of technical education imparted to them.

Quality is not obtained by chance. Efforts must be made by everybody at every level and at various phases of education process. In this context, the concept of total quality management (TQM) which is being adopted by almost all industries throughout the world appears to be the only hope for establishing quality standards in technical institutions. An attempt is made here to develop some strategies for implementation of total quality management in technical institutions.

Basic Concept

TQM applied to technical institutions may be thought of as a way of organising and involving the whole institution — every department, every activity and every single person (Management, Principal, Teachers, Students and Staff) at every level towards achieving academic excellence, high quali-

ty education and research, growth of institution, student satisfaction, and finally, moulding engineers of highest calibre.

TQM can work well where culture and environment in the institution reflects academic quality as a way of life for all its employees.

Success of TQM programme generally lies in the enthusiastic support and commitment especially of faculty members as 'Change Agents'. TQM strongly believes that the main asset of institution is the faculty. If faculty is well developed, they would certainly develop students of highest standards.

At present about 78 universities in USA are using TQM principle in the administration and academic activities. The revolution to change USA education system by the year 2000 has already begun.

In India we may start implementing TQM principles atleast in a small way to begin with, in administration and academic programmes

Some Strategies for Implementation

As per the marketing concept applied to educational institutions, students may be considered as customers. They pay tuition fee and other fees as price for getting high quality education in return and hence they form core or nucleus of the TQM concept. It is therefore, the responsibility of the institution to impart right kind of technical knowledge to the students according to the developmental needs of society and prepare them to take part in nation building. It is also necessary to make efforts to bring out latent creative skills hidden in them and thereby make them contribute to the prosperity of our country.

In order to satisfy the above goals, desirable measures related to students, faculty and administration are as follows.

Students

- * Imparting high quality education includes inculcating in students the zeal and initiative for learning the subjects and also the connect-

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ed new topics. Flexible system of education may be introduced with a variety of elective subjects as per needs of the industries (and hence job potentiality).

- * Students should also be made to realise the importance of learning process. The following parameters play a vital role : maintaining minimum of 75 per cent attendance in each subject, compulsory participation in tutorial class, laboratory class, quiz programme, group discussion and classroom discussion, seminars, industrial and field visits, etc and submission of all home assignments regularly.
- * Development of student oriented academic culture. This is possible by creating opportunities for their participation in co-curricular and extra curricular activities, etc and provide necessary facilities for the same.
- * From second year level onwards, summer training should be made compulsory for every student of engineering. The duration may vary from 4 to 6 weeks. Each student has to deliver a seminar based on summer training and submit a report on the same.

Faculty

The important requirement of a teacher is that, he should enjoy training and developing students. He should understand their aspirations and motivate them. He should have good psychological skill and must be able to classify students according to their grasping power and tackle them differently. He should be quite tactful, in the sense that, he should start teaching initially what the students want and then start teaching what he has planned to teach them. By following this simple rule, he will be able to attract students into his fold. The fundamental requirement of any teacher is that he should possess excellent communication skills. Teachers in technical institutions must invariably have the following important qualities to be a partner in TQM.

- * He must motivate the students to actively participate in research programme, project works etc.
- * Involve students as far as possible in regular teaching by way of classroom discussion, seminar, technical quiz, etc.
- * Laboratory training plays an important role in technical education. In this connection, a teacher should create an opportunity for every student, to study each and every equip-

ment in the laboratory, explain the significance of each experiment and its application, etc. One important aspect generally neglected in the laboratory record is comments on results and graphs. It is the prime duty of the teacher to insist on the above aspects, so that, it improves the student's skill in analysis and interpretation. This skill will ultimately help a student to become a good researcher and designer.

- * Coming to the project work, especially at undergraduate level, the teacher must be able to make the student select his own project which is innovative and help him to do it independently as far as possible.
- * Teachers should improve their subject knowledge and teaching methods continuously by attending various training programmes like summer schools, winter schools, workshops and seminars, etc.
- * Senior faculty like professors should train the junior teachers and create awareness in them. They are also partners in achieving TQM goals in the academic programme.
- * Success of TQM programme lies in the enthusiastic support and commitment especially of faculty members as leaders of change. To achieve academic excellence and growth of the institution, they must know how to translate the mission and objectives of the institution into academic values and practices. They must also know how to coach the students to achieve newer heights in education.
- * There are innumerable number of excellent professional societies in the world which are contributing a great deal to the advancement of science and technology. By becoming a member of a national or international society, a teacher can become aware of the various developments and innovations in different fields of engineering around the world and transfer the same to his students for improvement of their professional knowledge.
- * Teachers in technical institutions, are expected to have good exposure to the practical aspects of the field and industry, so that they can enrich the minds of the students with practical skills.
- * Teachers should constantly make efforts to improve their teaching methodology. For better assimilation of subject knowledge, they

must stress basic concepts of the subject before touching the advance topics. Spoon feeding like dictation of notes in classroom, supply of cyclostyled notes, etc may be avoided.

- * Students must be guided effectively to refer to various text-books and journals and prepare their own notes and assignments.
- * Students must be encouraged by the teachers to have closer interaction through clarification of doubts both inside and outside classroom, preparation and presentation of papers, seminars, and writing articles for journals, etc.
- * The standard of question papers related to any course of study is generally considered as a yard stick of academic standards of any institution. A teacher while setting question papers should set it in such a way that he tests the intelligence and innovative mind of students and not merely their memory.
- * TQM in education institutions call for continuous assessment of students by way of conducting weekly objective tests in theory subjects, viva-voce in laboratory class, assignments with thought provoking topics which include open ended problems and case studies.

Administration

- * Every technical institution must have necessary infrastructural facilities as per norms laid out by AICTE/UGC and affiliating university.
- * With regard to working and facilities in office, TQM calls for providing necessary communication facilities, filing system, computerization, etc.
- * Every institution must scrupulously follow norms laid out with regard to selection and recruitment procedures of faculty, office staff, laboratory staff, etc
- * TQM concept believes that the main asset of institution is faculty. If faculty is well cared and developed, they will automatically develop the students and then the institution. In this connection all the staff in the institution must be provided with salary, perks and all facilities as per AICTE/UGC norms to motivate them and to minimize turn over.
- * The administration has responsibility to pro-

vide the necessary training and placement services for students by establishing a separate cell whose main objectives would be to have a close interaction and relations with various industries for giving training to the students and provide them placement after graduation.

- * Good library with required number of volumes and excellent journal section forms the backbone of any technical institution. Library should be equipped with adequate furniture, reprographic facilities, etc. The library should have a conducive atmosphere (if possible air conditioning) for effective study.
- * The administration of any technical institution which includes Principal, Management and governing body should have a commitment to implement TQM and make the institution as one of the centres for excellence in technical education.

Summary

Implementation of TQM in technical institution calls for a total change in culture in terms of customs, practices and improvements by creating increased sense of caring brought about by improved communication, involvement and training. It involves the integration of all functions, processes and personnel within an organization in order to achieve continuous improvement in the quality of technical education.

By following TQM principles we can bring about harmony and quality working style in all the facets of the institution and help it gain the top position and maintain it.

Finally, TQM consists of doing for the institution what should be done as a matter of course. The fruits of implementation of TQM may not be available instantly, like magic tree, but it is sure to show improvements in academic standards over a period of time.

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Sangeet Dakshayani

A Mythological Play With a Difference

Jogeshwar Nandurkar*

I have done a lot of reading in the last two years. The book to fascinate me most was my father, Nilkanth Nandurkar's Marathi play *Sangeet Dakshayani*. It has been recently published by Tridal Prakashan, Bombay. The book has taken as many as thirty years to see the light of the day. Of course, I had read it first as a small child. However, I read it again after it was published. It was a great pleasure to read it again with a "trained insight".

Sangeet Dakshayani is a Marathi musical mythological play in four acts. It can be simplistically asked about such a play as to why a modern writer should choose to handle a mythological theme when there are thousands of modern themes to deal with. However, our mythological stories have a lot of bearing even upon the modern age. All of them are essentially parables. They have got to say something significant about human life — something that can be relevant to every age. These stories have been churned out for centuries and centuries without trying to bring out all their hidden messages. Fortunately, that is not the case with *Sangeet Dakshayani* which unfolds a struggle of values underlying a mythological story.

My father is a multi-faceted man — a writer, a poet, a painter, a sculptor, an orator, a make-up man and what not! It is very rarely that such a man is born. His Marathi play called *Ababa, Vithoba Bolu Lagla* was performed by Little Theatre on the professional Marathi stage in 1979. It was a great hit on the Marathi stage. It was translated into Gujarati as *Hey Ranchod Rangeela!* and was quite popular with the Gujarati audience. Father's another important contribution to Marathi literature is his book called *Shreepad Lilamruta* — a biography of the late Mr. Shreepad Kane alias "Kane Maharaj", his spiritual mentor, in verse. The book runs into as many as 21 cantos and as many as 3500 verses. Illustrated by father himself, the book has been printed in his own beautiful handwriting. Coming from the pen of such

an eminent man, the play can be expected to be a very good one. It does live up to that expectation.

The play opens in the court of a king called Himachala whose wife has recently given birth to a girl. The court is bristling with pleasure. A great sage called Narada suddenly arrives on the scene. On seeing the girl, Narada declares that she is the reincarnation of Dakshayani, Lord Shiva's wife. He then goes on to recount the story of Dakshayani which the rest of the play depicts.

Then we have a great emperor called Daksha who is extremely proud of his wealth and prestige which he has acquired through *tapasaya* a penance. Much to his chagrin, one of his daughters called Dakshayani falls in love with Lord Shiva, an ascetic god who lives on a mountain called the Kailas, with an ascetic simplicity, and spends all his time upon meditation. Daksha does not want to have such a 'poor' son-in-law. However, Dakshayani marries Lord Shiva at the end of the first act.

Then the struggle of the play gets into full swing. The next two acts finely develop that struggle of values in which Daksha stands for a blind passion for material things like wealth and prestige while Lord Shiva and Dakshayani stand for spiritual values like '*tyaga*' — renunciation and '*varagya*' — ascetism.

Daksha's wife is able to perfectly understand the true value of Lord Shiva and the spiritual values that he stands for. She keeps advising her husband to reconcile himself with Lord Shiva, but to no avail. Inebriated with his vanity, Daksha refuses to heed her advice. He has nothing but extreme hatred and anger for Lord Shiva whom he perceives as a beggar who has undeservedly married a princess. He has got a talented and erudite sycophant in the form of a sage called Bhurugu who keeps adding fuel to his anger for Lord Shiva.

The struggle comes to a head at the end of the third act when Lord Shiva and Dakshayani are not invited for a great "yaga" called "Putrakameshti" which Daksha arranges. Dakshayani attends the "yaga" against the wishes of her husband. Far from

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being welcomed by a loving father, she has been humiliated by him. Now unable to confront her husband, she chooses to renounce her life.

In the fourth act, when the sad news of Dakshayani's death reaches Lord Shiva, he is no longer able to contain his anger. The "Rudra" in him rises up. He bids Virabhadra — one of his most loyal servants — to capture Daksha. Virabhadra follows the order — Daksha has been assaulted, captured and taken to the Kailasa. Daksha's wife is extremely worried about him when she hears Dakshayani's voice, telling her that she would save her father's life

The penultimate scene finds Daksha in chains, standing before Lord Shiva as a criminal standing in the dock. All his wealth and prestige have now shattered to smithereens. Lord Shiva is about to kill him when he hears Dakshayani's voice, telling him about the promise she has made to her mother. So Lord Shiva condones Daksha. He offers a valuable advice to Daksha — an advice that is especially precious in the present age of "political correctness". Lord Shiva explains the true meaning of "yaga" — "yaga" does not simply mean making a small fire and worshipping it. One's whole life should be like a "yaga" — a life dedicated to service to the world. One should dedicate oneself to serving the humanity instead of running after a thing as evanescent as wealth or prestige.

It is a devoted wife's loyalty to him which finally saves Daksha's life. It subtly suggests that it is such sacred values and not a blind obsession with money and prestige which can be truly life-giving and life-saving. The writer has subtly suggested another important thing — behind the facade of the ascetic gentleness of people like Lord Shiva, there lies a ferocious anger which can burn down the whole world in an instant, an anger that can flare up when the occasion demands. So their saintliness should not be taken for a sign of their weakness as it has been so often done.

In this play, the Kailas symbolises the highest level of existence which only Lord Shiva and Dakshayani can attain. Daksha can never hope to attain it. So the play can be viewed upon as a subtle comment upon the modern man who refuses to rise up above the low level of his existence, who can go to any extent to acquire evanescent things like wealth or prestige.

Unfortunately, today's Indian society is littered

with the Dakshas and the Bhrugus. If we have more people like Lord Shiva and Dakshayani, it is only the "Rudra" lurking in them which can bring the Dakshas and the Bhrugus to their knees. This is the subtle message which the play ultimately conveys.

The concluding scene takes us back to the court of Himachala where Narada concludes his narration and advises the king and the queen to offer their daughter to Lord Shiva when she comes of age. Both of them happily agree with it. The play ends with presenting a character which is in complete contrast with Daksha.

The writer has thus made a clever use of "flash-back" in this play. This play was the first Marathi musical mythological play to have this technique, as claimed by a talented and erudite Marathi critic, Prof. V.B. Ambedkar in his introduction to the play.

The play consummately explores the emotional world of the concerned mythological characters. Interestingly, even gods and deities have human emotions in this play. Yet the writer has taken sufficient care to invest them with a divine dignity that sets them apart from ordinary human beings.

All the characters have been vividly and realistically portrayed. Even Daksha comes across as a flesh and blood human being rather than a monster as a typical mythological villain is often made out to be. He seems to have a soft corner for his wife even though the advice she offers to him often falls on deaf ears. It is this essential humanness of this character which makes it a true representative of the modern man.

The writer has carefully built up a mythological atmosphere in this play. In Marathi musical plays, it is music which often overshadows the play. Fortunately, that is not the case with *Sangeet Dakshayani*. Far from being obtrusive to the play, its poetic songs enhance its mythological atmosphere by lending a poetic touch to it.

Struggle is the essence of drama. The writer has rightly chosen a theme which is replete with struggle for this play. So the play has many intensely dramatic moments which make it highly absorbing.

In sum, here is a play that deserves recognition — a play that deserves to be translated into various languages and performed on the professional as well as a nonprofessional stage. A play with a significant message that can serve as a beacon-light in the gloom besetting us.

Priorities in Education

Justice V.R. Krishna Iyer (Retd.) delivered the Convocation Address at the Thirtysecond Annual Convocation of the Shivaji University, Kolhapur. He said "Our national education has to get out of mere book-bound, marks-focused lucubrations and get to grips *with national realities and fight evil without inhibitions. The old dogmas of University learning cannot face the new challenges of national crises. The cure for corruption in public life is the incorruptability factor in education. In this dimension, our universities are our salvationist instrumentalities. Without fear or favour, affection or ill-will, all issues must be discussed with dialectical probity and Gandhian purity.*" Excerpts

No country can advance, even with the blessings of Almighty Dollar for which our leaders and tycoons mendicantly implore, if its college campuses and university disciplines are barren of creative intelligence and character-building processes. Ultimately, education is the manifestation of the divinity, dignity, excellence in studies and value-orientation of every person who is touched and refined by the ampler air and finer stream of these mansions of erudition, intelligence and integrity

The best test of a country's progress is the edifying impact of the classroom, the extra-mural attainments and the scientific temper generated in the youth. Indeed, the right to life is meaningful only if dignity and faculty and moral sensitivity are acquired by every member in society. These are not commodities to be bought in the shop like Kentucky fried chicken, coke, hamburger, Scotch whiskey or fast foods from Macdonald's, by paying a fast buck. Graduation is not a cash-and-carry product or capitation fee purchase confined to the affluent sector. On the contrary, affluent consumerism — the dis-

ease of 'affluenza' — which now possesses the nouveau riche of India, is a killer pathology which philistinises, even barbarizes, our rising generation, and pauperises and criminalises the morally vulnerable circle which is tempted into the Circean spell of violent, vulgar life or initiated into the cocaine cult of moral morbidity. What about the vast 'rurban' millions who have nothing to look for except blood, toil, tears and sweat and nothing to lose except their lives? Are these submerged invisible agrestics people who do not matter? Where lucre is the open sesame for entry into the portals of higher learning, the have-not humans cease to be equal citizens! What a structural misadjustment of our Socialist Republic violative of the egalitarian legacy of our Founding Fathers! Corruption is now the counterfeit coin in pervasive circulation currently in our country not only in political offices and administrative establishments but ubiquitously operational in the hallowed precincts of professional education, why, polluting even admission to L.K.G. and U.K.G., spiralling up to the highest decks of degree-distributing institutions! If the desti-

ny of the nation is shaped in the classrooms of our schools of learning it is basic patriotism to vaccinate our educational system against commercialism and pasteurise our public life against the contamination of base bribes. Today, the needle of suspicion is pointed at even the summit seats of constitutional power and even journalists, justices and gurus of diverse religions, not to speak of the money-hungry managers of medical, scientific and military establishments and other strategic, sensitive organs of national life. Never in the history of Gandhi India did Mr. Corrupt become so democratised in our Socialist Republic! This malignant cancer is not incurable. But the therapeutics for this pathologic toxin must be administered by a dynamic, dramatic drive to immunize our school culture from the vices of market-friendly materialism, 'grabby' liberalism and gargantuan globalism. Otherwise, dialectically analysed, 'hawala' rule of law and 'Bofors' rule of life are inevitable both as process and product in a country where Almighty Dollar serendipitously becomes the principal deity to be worshipped. A hard look at our educational values is the first step to remedy the malady. The source of hope is our public universities.

What with the Bofors scandal, Securities scam, Vohra Committee revelations, Hawala viral syndrome and the protean forms and versatile novelties of macro-scale politico-mafiosi manifestations, Indian humanity is flabbergasted and bewildered by the brazen and ubiquitous wheeler-dealer operations of the governing elite. Where lies the blunder, they wonder, and ask what our Republic's

ominous future is. People's power must punitively wipe out the criminality of Bharat (mafia) unlimited ! No placebo effect of Party rhetoric nor nocebo effect of resignations by political heavy weights nor the voodoo of judicial writs can extirpate corruption until student power, youth power and the vast community's conscientised power awakes with enlightened vigour and planned programmes of non-violent action, making purification of public life a *sine qua non* of Indian development. Our national education has to get out of mere book-bound, marks-focused lucubrations and get to grips with national realities and fight evil without inhibitions. The old dogmas of University learning cannot face the new challenges of national crises. The cure for corruption in public life is the incorruptability factor in education. In this dimension, our universities are our salvationist instrumentalities. Without fear or favour, affection or ill will, all issues must be discussed with dialectical probity and Gandhian purity.

Education, as John Ruskin explained in lovely diction, "is not teaching the youth the shapes of letters and the tricks of numbers, and leaving them to turn their arithmetic to roguery and their literature to lust. It means, on the contrary, training them into the perfect exercise and kingly continence of their bodies and souls. It is a painful, continual, and difficult work to be done by kindness, by watching, by warning, by precept, and by praise, but, above all, by example."

Culture is a matter of the heart and love of the people, not a matter of masala slogans or populist claptrap which is the elec-

toral opium of the masses. Let me cite Vivekananda who stressed the essence of education in emphatic terms :

"They talk of patriotism. I believe in patriotism and I also have my own ideal of patriotism. Three things are necessary for great achievements. First, feel from the heart. Do you feel? Do you feel that millions and millions of the descendants of gods and of sages have become next door neighbours to brutes? Do you feel that millions are starving today and millions have been starving for ages? Do you feel that ignorance has come over the land as a dark cloud? Does it make you restless? Does it make you sleepless? Has it gone into your blood, coursing through your veins, becoming constant with your heart-beats? Has it made you almost mad? Are you seized with that one idea of the misery of ruin, and have you forgotten all about your name, your fame, your wives, your children, your property, even your own bodies? Have you done that? That is the first step to become a patriot, the very first step."

Judged by this crimson, humane standard, invasion by foreign corporate infiltrators and their native collaborators, under a globalese theology of marionette economics, is a dubious bargain. This criticism is not xenophobia or claustrophobia but simple self-reliance of Gandhian, Nehruvian vintage. We need radical humanism, dynamic secularism, and synthesis of material and spiritual values instilled thro' our educational system, sans which this

country will be mere geography inhabited by a conglomeration of wrangling communities and hungry political operators.

Our founding fathers, realising the importance of the human right to education, had made it a 'principle fundamental in the governance of the country' that the State shall make effective provision, within its utmost economic capacity, for securing the right to education to persons who have no means of their own (Art. 41). Nay more. The State is obligated to provide, within a period of 10 years from the commencement of the Constitution, for *free and compulsory education* for all children until they complete the age of 14 years (Art. 45). Read with the right to life (Art. 21), the Supreme Court has held this to be a *fundamental right*. And yet, nearly two score and ten years after, India's illiteracy is a shameful fifty per cent and female illiteracy a shocking sixty per cent. Absent literacy, education is illusion; and higher education is the monopoly of the proprietariat, the proletariat being left to do bonded labour if denied the State-obligated minimum of primary and secondary education nor the means to gain access to colleges. Illiterate India is condemned to mass misery if education is limited to the creamy layer of society whose children buy seats from babyhood onwards in English Medium L.K.G to master's degree in professional courses. Please recall Martin Luther who said :

"The prosperity of a country depends, not on the abundance of its revenues, nor on the strength of its fortifications, nor on the beauty of its public buildings; but it consists in the number of its

cultivated citizens, in its men of education, enlightenment and character."

Human resources are the great promise of a nation's future. Our optimistic and straight forward Finance Minister has had to confess at a Convocation Address that around 40% of our people virtually live below the destitution line, euphemistically called "poverty line" as austerely defined by the Planning Commission. With all our boasts of boundless advance, we rank as 134 in the human development index, according to the Human Development Report 1995, published by the UNDP. Our Finance Minister further revealed here last year (1994):

"Even now, of every 1000 children born in India, nearly 80 die before they reach the age of one year. Progressive degradation of land and water resources threatens the livelihood of millions of farmers living on the edges of subsistence. Our urban areas are unable to cope with the growing pressure of population and large sections of people do not enjoy access to such basic amenities as safe drinking water and sanitation."

Again, in another such speech in Bangalore he pleaded:

"I have a strong feeling that over the years, the Governments at the Centre and the State have invested far too much of their administrative and financial resources in industry and trade and neglected such basic tasks as provision of a decent system of elementary education and primary health care and control

of environmental degradation. There has also been inadequate sensitivity to the gender issues in our quest for equity and development."

This is a moderate statement. The actual situation is unspeakably pathetic. Go to starving Kalahandi or Surat's plagued slums!

It is amazing that India has, perhaps, the largest number victimised by bonded labour, child labour, female infanticide, physical and mental disablement and illiteracy escalating year after year in gross numbers, while the 'greats' in power flatter us with figures of declining inflation and of bloated investments. By G. 7 cartels, developmentally irrelevant and expensively consumerist, thereby occupying our scarce economic space, robbing our natural resources, polluting our biosphere and strangling us in the long run with trade trap, debt trap, chemical trap, and which, unless arrested, may prove a death trap. Orwell's doublespeak alone can explain how we can claim to be more prosperous. When prices of life's necessities, like food and medicine, clothes and housing, are ballooning beyond the reach of the populace, it is baloney to claim that there is growth and development. The fundamental issue is what is development and for whom? Is market marijuana which magnets multi-national corporations into our naive nation a matter for pathos or bathos? To scuttle the Constitution's socialist basics is to bastardize our social order. And when Enron syndrome and Union Carbide gassassination occur, should not protest and critiques rise loud and clear from intellectuals? Silence is guilt where there

is a duty to speak.

Look at the contradictions in our priorities. We have no drinking water for many but Scotch parlours are aplenty! Marie Antoinette remarked before the French Revolution and the guillotine, when told that her people had no bread, let them eat cake! What was her fate?

The point I am driving at is about the poverty curtain more impenetrable than the iron curtain. The classes and the masses in many countries are facing extremes of prosperity and poverty, the wealth of nations going to the North and the poverty of nations sinking in the South. One is reminded of Charles Dickens in the "Tale of Two Cities":

"It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way."

Let me not sound like Cassandra prophesying doom. India has also made great strides after Independence, of which all of us, the shareholders of India Incorporated, can rejoice.

There is no doubt that we have advanced in science and technology, built big dams and executed giant projects, and, with a vision of swadeshi and self-reliance, created a strategic public sector which occupied the com-

manding heights of the national economy and simultaneously promoted also Joint and Private sectors, Co-operative and Small Scale enterprises geared to the needs of the people. Likewise, our defence department has achieved marvels and our pharmaceuticals have registered remarkable discoveries; our nuclear technology has done us proud; but taking a holistic view of the life of nearly one billion Indian humans, our Socialist Republic shaped its policies and projects to wipe out poverty by heroic strategies. Everyone in power, accountable in democracy, must remember that "history is about the most cruel of all goddesses" - (Engels). So we must be wary and should not go crazy about Mercedes Bentz, Coke, dangerous dams, luxury imports and MNCs who corrupt our public life and subtly engineer Operation Recolonisation !

Our scientists are among the foremost in the world, even so our technologists, we being the third largest scientific community in the world. We have made industrial advance and agricultural progress Steel, coal, biodiversity, Operation Flood and Green Revolution, and an independent Justice System, are some of our positive points. It is, therefore, right to feel proud of our attainments in the field of science and arts and the diversity of our cultures. Therefore, it is not my object to detract from the social, economic and cultural ascent after we attained Independence. Even so, it behoves us to be honest to ourselves and be faithful to the Constitutional goals. The Supreme Sovereign, as per the Preamble which is inviolable, is "We the People of India" — everyone of the 950 billion humans who are Indians,

be their religion or region what it may. The masses of Indian mankind suffered feudalist privations with graded inequalities and colonial servility. That is why we became a rich country with poor people. A nation with a vast reservoir of human and material resources but a large humanscape condemned to a life of chill penury, homeless and half-starved, must be able to exercise self-criticism, not self-deception. After all, a University is a hallowed place which breathes the finer spirit of knowledge and the fearless expression 'which is in the countenance of all science'. Universities are functional only if they impart knowledge and integrity fearlessly. As T.H. Huxley put it:

"If a little knowledge is dangerous, where is the man who has so much as to be out of danger?"

We must dare and do and act on knowledge-based conclusions. Knowledge is power and we must dare to learn and expose.

We have to be gravely guarded against genuflecting before the North or, with a yen for 'West is best' economies, create a yuppie class. Our youth should not degenerate into limpet, lumpen or loony categories. The Indian cultural treasury is a glory of which we must be proud. Look at the sole Super-Power which dictates to us the do's and don'ts of our political and economic and even military strategies ! Our 'trade' and 'service' sectors cannot be pledged to the private, profit-making proclivities of the world's self-appointed gendarmerie or the WTO's commandments. Our sovereignty and security are the first charge on the youth's commitments. We must beware of the

conditionalities of foreign aid and be equally wary of the strategy of the MNCs which use world hunger as big business and bend Third World countries into banana republics and cucumber colonies. 'Small is beautiful' and appropriate technology are what Gandhiji and Schumacher taught us, not high-tech. conquests.

Food First, a best seller in the US, tells us with facts and figures how giant business from abroad 'modernise' our hunger with fertilisers and pesticides and suppress our vintage agriculture and promote a dependencia syndrome. Even the green revolution viewed in retrospect, is suspect success.

Maybe, you may wonder how my wandering address has pertinence to a University Convocation. At Oxford and Harvard et al everything that affects national and international issues is discussed, bluntly, if need be, and critically always. It is, therefore, appropriate that at a time when the nation is stunned by corruption and passes thro' a crisis of reversal of established policies, everything that impacts on our 'tryst with destiny' must come under your scrutiny Glasnost or transparency in government, freedom of information and fearless expression are demands Universities must encourage if we are to know the truth "And ye shall know the truth and the truth shall make you free". I may be wrong in my ominous observations. But do keep an open mind, resist subtle forms of "new slavery" and insist on a Just World Human Order. Public matters must never hide under official secrecy but must be exposed to the sunshine of people's gaze. Democracy is incompatible with bureaucracy which

revels in what Churchill called a riddle wrapped in a mystery inside an enigma. The tragedy of our times is public apathy and cloistered power process which facilitate corrupt practices. We are the Third World and within its frontiers are a destitute Fourth World. Why are we victimised and by whom?

Dr. V. Kurien, the pride of India in the field of dairy self-sufficiency, forcefully argued about the division of the world as North and South as the new imperialism that threatens mankind in his Address at the Eighth World Congress of Food Science and Technology :

"It would mean that one-fourth of the world's population would occupy three-fourths of its area while the remaining three-fourths of the world's people must make do on but one-fourth of its land. This basic fact, I would argue, is the reason we are poor. And, should we not ask the question how much of this land was the historical home of its present population, and how much was forcibly occupied?"

Dr. V. Kurien also exposed the covert imperialism of the North and the unfortunate surrender of the South, particularly India. The Western wave wipes out the wisdom of generations of Indians. He asks : "What are the lessons to be drawn from our experience? I believe the first and most important lesson is that we must trust the wisdom, the innocence and the enlightened self-interest of the people". We have and had technological capacity but now we condemn and feel contempt for our own achievements

and hanker after dazzling foreign goods and services and hasten to sign treaties contrary to swadeshi and sovereignty.

American scholar Prof. Noam Chomsky rightly complains in a recent interview about the damage that liberalisation does to the poor. In his own words :

"India (has always) had very advanced agriculture, agricultural research projects, programmes and so on. But they are being destroyed, bought up by multinationals. The Indian scientists are very good. They now get five times more salaries working for multinationals. This is an agrarian country. It needs agricultural research. Take pharmaceuticals. India has had quite an effective pharmaceutical industry. Drugs in India were much cheaper than Pakistan because India used to produce itself. Now it has got to stop. Neo-liberalism means you destroy the pharmaceutical industry."

(Hindu dated 22-1-'96)

University intellectuals must stem the rot and passionately rouse the slumbering nationalism and the talent lying under the debris, so that brave new Bharat may be your pride.

'Industrialise or perish' was a seductive slogan which, by insensitivity to considerations of sustainable development, made the Third World poorer in quality of life, perilous in toxicity of environment and destroyed values too dear to be jettisoned. And now, we have, by the entry of MNCs like the Union Carbide et al and their simian imitators at home and comprador cliques

geared to maximum profit, whatever the social cost and eco-catastrophe, reached tragic terminal illness; and so, the ghastly reality is 'industrialise and perish'. A new synthesis is the desideratum where development with holistic humanism takes over from growth sans common good.

Reflecting with a disturbed conscience, I sometimes wonder whether the volte face from a socialistic pattern to an IMF-structured acquisitive society with heartless conditionalities is a contra-Constitutional coup, or a myopic blunder of our leaders under yankee commercial-military pressures. Youth power is the locomotive of our constitutional order with its left slant. Maybe, I am in error but the future will tell us who is right? By then, it may be irreparably late. Ask yourselves. *Quo vadis Socialist Indian Republic?*

Let me conclude. My personal philosophy is what has been best articulated by Terence more than 2000 years ago and by Marx much later. "I am a human being. I count nothing human alien to me." Ancient Indians had a world perspective and universal philosophy. We are heirs of that cultural heritage. You are the builders of a New World Order with egalite, not hegemony, where human rights are an accessible reality and every man, woman and child on this planet has the opportunity to accomplish her or his potential. These are the values to build a better world, to strengthen a Juster Order and to reverence diversity of systems in our pluralist universe.

The moral, mental and material odyssey of India must appeal to you intellectually and prod you

to lively analysis and synthesis. That is the way the vast reservoir of creativity Indian youth possesses can be mobilised in our war against poverty, ignorance, disease and, above all, colonial intellectualism. Your commitments are the twin pursuits of excellence and social equity. Your University must endeavour to mould the minds of the youth and strive to draw up and execute a truly national Indian agenda of development which empowers the people at large and defends the independence and self-determination of a near-billion united community, we call India, that is Bharat. What an exciting challenge! What a mighty task! The degrees you have been granted today carry a heavy responsibility to your country. Don't run away to the Visa office of some foreign country but work hard here at home to make India great and yourself strong. Do battle against communalism, casteism and parochialism. There is enough in this land for everyone's need, but not for a few swindlers' greed. The journey is long and we are far from home. We have promises to keep and miles to go before we sleep. Your Alma Mater is your inspiration in the selfless, stainless career you must carve out as your goal in life.

I conclude my oral prolixity with a final appeal for your total commitment to the people of India. I quote from a Tagore-Gandhi dialogue to hammer home my submission.

"Once Gurudev Rabindranath Tagore asked Gandhiji, 'Gandhiji are you so unromantic? When in the early dawn, the morning sun rises, does it not fill your heart with joy to see its reddish glow? When the birds sing does not your heart thrill with its

divine music? When the rose opens its petals and blooms in the garden does its sights not bring cheer to your heart?'"

The Mahatma replied "Gurudev, I am not so dumb or insensitive, as not to be moved by the beauty of the rose or the morning rays of the sun or the divine music of the birds. But what can I do? My one desire, my one anxiety, my one ambition is when shall I see the red tint of the rose on the cheeks of hungry naked millions of my people? When shall I hear the sweet and melodious song of the birds in place of their agonising sighs? When will such music come out of their soul and when will that day come when the light of the morning sun will illumine the heart of the common man in India? When will I see its lustre and brightness on his face?"

A last Caveat

Privatisation and, its first cousin, commercialisation are pollutants if they capture education as trade-related 'goods' and 'services'. There is, in the wake of the contra-spiritual 'dis-enlightenment' emanating from the IMF,

a nascent tendency to privatise universities and commoditise degrees and a legislation — The Private Universities (Establishment And Regulation) Bill, 1995 — is pending in the Rajya Sabha. Philanthropists are welcome, vocational courses geared to national needs, industrial, agricultural and other, are good. Accountable autonomy for institutions of higher learning is obligatory. But to make education a trade or business is to vulgarise hallowed spaces of light, liberty and learning. It is for you, young friends and the academe to defend our vintage values against assaults by the moneyocracy.

The finest function of a University is to make the student community tolerant, yet independent, ready to hear both sides but be firm on fundamentals. This thought has been best expressed by Gandhiji with matchless brevity.

"I do not want my house to be walled in on all sides and my windows to be stuffed. I want the cultures of all lands to be blown about my house as freely as possible. But, I refuse to be blown off my feet by any."



CENTRAL INSTITUTE OF ENGLISH AND FOREIGN LANGUAGES

HYDERABAD - 500007 Advt. No. 11/256

DEPARTMENT OF DISTANCE EDUCATION

Applications are invited for admission to the following distance mode (correspondence) courses

SL. No	Name of the course	Eligibility	Last date for receipt of applications
1	PGCTE (Postgraduate Certificate in the Teaching of English) Oct '96-Oct '97	M A in English or an equivalent qualification*	30th June 31st July (with a late fee)
2	PGDTE (Postgraduate Diploma in the Teaching of English) Dec '96-Dec '97	PGCTE or an equivalent qualification*	31st August 30th September (with a late fee)
3	M Phil in English	PGCTE with a minimum GPA of 3.00 or an equivalent qualification*	31st July 31st August (with a late fee)

* For details see the prospectus

For application form and prospectus for the above courses please write to the Head, Department of Distance Education, CIEFL, Hyderabad - 500007 enclosing a crossed Postal Order/ Demand Draft for Rs. 15/- (Rupees fifteen only) in favour of the Registrar, CIEFL, Hyderabad - 500007. You must specify the course you are interested in.

Sd:-
Acting Registrar

SPREADSHEET

BRAIN DRAIN DATA (1)

Indian Students Going Abroad - Annual Outflow State-wise and Sex-wise - 1992-93

Sl. No	State/UTs	Male	Female	Total
1	2	3	4	5
1	Andhra Pradesh	1810	188	1998
2	Arumachal Pradesh	1		1
3	Assam	15	3	18
4	Bihar	37	4	41
5	Goa	2	3	5
6	Gujarat	184	19	203
7	Haryana	34	4	38
8	Himachal Pradesh	1		1
9	Jammu & Kashmir	12	1	13
10	Karnataka	647	116	763
11	Kerala	81	15	96
12	Madhya Pradesh	15	2	17
13	Maharashtra	773	192	965
14	Manipur	2		2
15	Meghalaya	1	..	1
16	Mizoram	.	.	
17	Nagaland	..	.	
18	Orissa	4	1	5
19	Punjab	42	19	61
20	Rajasthan	29	6	35
21	Sikkim	2		2
22	Tamil Nadu	955	173	1128
23	Tripura	.		
24	Uttar Pradesh	101	10	111
25	West Bengal	286	64	350
26	A & N Islands	1	..	1
27	Chandigarh	18	3	21
28	Dadra & Nagar Haveli
29	Daman & Diu
30	Delhi	491	130	621
31	Lakshadweep
32	Pondicherry	2	...	2
Total		5546	953	6499

Indian Students Going Abroad - Annual Outflow Country-wise and Sex-wise - 1992-93

Sl. No	Country	Male	Female	Total
1	2	3	4	5
1	Afghanistan	1	...	1
2	Australia	160	17	177
3	Austria	6	...	6
4	Belgium	10	2	12
5	Canada	48	13	61
6	China	3	2	5
7	France	15	7	22
8	Germany	10	5	15
9	Hungary	1	..	1
10	Indonesia	1	.	1
11	Italy	5	2	7
12	Jordan	14	2	16
13	Korea	1	..	1
14	Laos	1	..	1
15	Nepal	1	.	1
16	Netherlands	2	.	2
17	New Zealand	2	...	2
18	Others	3	.	3
19	Pakistan	2	..	2
20	Philippines	4	..	4
21	Singapore	1	..	1
22	Sri Lanka	3	.	3
23	Sweden	2	1	3
24	Thailand	3	..	3
25	U.K.	131	40	171
26	U.S.A	4910	816	5726
27	USSR	158	39	197
28	Others	48	7	55
Total		5546	953	6499

Annual Outflow of Students to Different Continents

Continent	1991-92	1992-93
1. America	5954 (92.1)	5787 (89.0)
2. Europe	248 (3.8)	240 (3.7)
3. Asia	35 (0.5)	39 (0.6)
4. Oceania	180 (2.8)	376 (5.8)
5. Others	49 (0.8)	57 (0.9)
Total	6466 (100.0)	6499 (100.0)

Source: Department of Education, Ministry of Human Resource Development, Government of India, 1994

Note: Figures in parenthesis indicate the percentage share for different continents.

NATIONAL INSTITUTE OF MENTAL HEALTH AND NEURO SCIENCES

BANGALORE - 560 029

No. NIMH/PER (5)/RECT/ADVT/95-96

Date: 21-03-1996

NOTIFICATION

Applications are invited for the following posts upto 10.5.1996 in the prescribed forms. Forms can be obtained in person/by post from the Registrar, NIMHANS, P B No 2900, Bangalore - 560029 by sending crossed Indian Postal Order for Rs 100/- drawn in favour of "DIRECTOR, NIMHANS" with self addressed stamped envelope (23x10 cms) affixing stamp worth Rs 4 50.

- 1 TWO ASSISTANT PROFESSORS OF NEURO ANAESTHESIA
(Reserved for SC/ST/OBC candidates)

Qualifications: M D Anaesthesia/M S Anaesthesia/Specialty Board of Anaesthesia (USA) or equivalent with training in Neuro-anaesthesia.

Experience: Three years teaching and/or research experience in a recognised Institution in the subject of specialty after obtaining qualifying degree of M D

Age limit: 40 years (Relaxable upto 45 years for SC/ST)

Scale of pay : Rs 3500-125-4500/- + NPA of Rs 850/-

- 2 ONE ASSISTANT PROFESSOR OF NEURO RADIOLOGY
(Reserved for SC/ST/OBC candidates)

Qualification: M D Radiology/M S Radiology/Specialty Board of Radiology (USA)/F F R or equivalent with training in Neuro-radiology for two years

(Experience, Age and Pay are as applicable for post at SI No 1)

- 3 ONE SENIOR SCIENTIFIC OFFICER (COMPUTER SCIENCES) (GEN)

Qualification: Ph D or M E /M Tech in Computer Sciences/Electronics or equivalent

Experience: Atleast three years experience in fabricating computer hardware or developing system software or developing programme in LISP or PROLOG related to IA techniques. In case of candidates with Ph D , no experience is required provided their thesis work was in any of the above areas

Age limit: 35 years (Relaxable upto 40 years for SC/STs)

Scale of pay: Rs 3000-100-3500-125-4500/-

- 4 TWO NURSING TUTORS (ON CONTRACT BASIS FOR THREE YEARS)
(Reserved for SC/STs)

Qualification: (a) B Sc Degree in Nursing or equivalent qualification from a recognised University/ Institution (b) Diploma in Psychiatric Nursing or equivalent qualification from a recognised Institution/ NIMHANS

Experience: (Desirable) Teaching in Psychiatric Nursing

Age Limit: 30 years (Relaxable upto 35 years)

Pay: Rs 2000/-, Rs 2060/- and Rs 2120/- (for 1st, 2nd and 3rd years respectively)

TERMS AND CONDITIONS

- 1 All British medical qualifications obtained after 11-11-1976 are not recognised.
- 2 The posts at SI No 1, 2 and 3 are permanent and are eligible for pensionary benefits in accordance with Govt. of India Rules
- 3 Candidates residing abroad are exempted from payment of application fee and applying in prescribed application form
- 4 Applications of eligible candidates for Asst Professors from abroad will be considered in absentia depending upon the merits of each case at their request
- 5 Those who are in service should forward the application through their employers or produce 'NO OBJECTION CERTIFICATE' at the time of interview, without which the candidate's application will not be considered
- 6 Cut-off date for calculating age and experience is 30-04-1996
- 7 Proportionate age relaxation will be given in respect of candidates in Govt. service as per rules

DIRECTOR

IFFCO Chair for Research on Fertilisers

A IFFCO Chair of Professor is proposed to be created in the Chemical Engineering Department of the Institute of Technology of the Banaras Hindu University for research on Fertilisers. This was announced by the Managing Director of the Indian Farmers Fertilisers Co-operation Limited (IFFCO) and alumni of the Department Shri U.S. Awasthi, on a suggestion made by the Vice-Chancellor Prof. Hari Gautam, at the inaugural of Platinum Jubilee year of the department. The chair will cost about Rs. 30 lakh and will form part of a core active research group on Fertilisers.

On this occasion a two-day seminar was organised by the Chemical Engineering Department on 'Indian Fertilisers Scenario Options for the Future'. Sri Awasthi, in his inaugural address, said that fertilisers industry had a feeling that the policy environment for attracting fresh investment in fertilisers sector was not quite conducive. Upgradation and expansion of existing plant was being undertaken as a short time measure to bridge the demand. He said even of short time measures taken, additional demand will not be met after 2000 AD, if additional plants were not created. Otherwise dependence on imports would increase, he added.

He pointed out that in present policy environment, the production cost of ammonia/urea using naphtha, fuel oil or coal as feedstock was considerably higher when compared to using natural gas. To increase the availability

of natural gas, Government of India was considering importing natural gas from Oman by laying a pipeline of about 100 km, and political negotiations were in progress for importing natural gas from Iran and some other countries as well. He regretted that power sector was being given a preferential allocation compared to fertiliser which earlier was otherwise. The gas pricing also was not conducive for investment in this area, he felt.

Joint ventures in manufacturing of phosphoric acid abroad would increase the availability of this raw material. Keeping this in mind Indian Companies including IFFCO were exploring vigorously the possibility of setting up joint venture projects for urea/ammonia production based on gas feedstock in gulf countries and phosphatic plants in Morocco, Jordan, Senegal, etc.

He said that in spite of production of about 8 million tonnes of nitrogen and 2.6 million tonnes P_2O_5 in 1994-95 a gap of 2.9 mt Urea, 0.8 mt of DAP and 2.12 mt MOP which was to be imported. Even at this level, per capita consumption of fertilisers was much lower in comparison to China, Europe and Kenya, etc leaving the scope to increase chemical fertiliser manifold.

However, Shri Awasthi said that on Technology front, the energy consumption level had been reduced by 50% approx. Lack of foresightedness in wake of liberalisation/prices of potassic and phosphatic fertilisers got doubled after 1992 and Urea became cheaper resulting im-

balanced use of fertiliser. Some changes effected in 1994 improved the scenario but imbalance still persisted. He held bureaucratisation and non-professional decision makers responsible for this malady. He called for a change in this colonial attitude.

He said that IFFCO was planning massive investment to augment production under 'VISION 2000' and investment in this area would not be a problem.

The Vice-Chancellor, Prof. Hari Gautam, in his presidential remarks, thanked Sri Awasthi acceding to the request of University for creating a chair and hoped that he would continue to have interest in the progress of department. He said that Banaras and BHU was a place which would not change but people from all sides kept on coming through their open windows.

Sri Pratap Narayan, Executive Director, Fertiliser Association of India, in his key noted address, on the topic 'Structural Reforms and the Fertilisers Industry' said that with decontrol of 50% of fertilisers industry in India, this critical sector had been exposed directly to macro-economic decisions of the government and the vicissitudes of the free market whereby the industry was moving into an 'uncharted' territory. What it would mean in terms of the implications for fertilizers use and foodgrains production was difficult to anticipate at this stage. Nevertheless, to remain insensitive to unfolding repercussions could prove very costly for India's continuous food security, stressed Sri Narayan.

SUCHAK on CD-ROM

The SNT Women's University and Pioneer Infovision Tech.(P) Ltd have jointly launched SUCHAK ON CD-ROM, a unique product of a partnership between a university and an electronic information company. The CD-ROM was recently released in Bombay by Mr. Krishna Raj, Editor, Economics & Political Weekly.

The CD-ROM is a bibliographic database developed by SNT Women's University Library and covers the fields of Sociology, Women's Studies, Nutrition, Community Health, Human Development, Library & Information Science and Special education. It includes 90,000 plus references to articles in journals, theses, books, chapters in books and reports. The CD-ROM has been developed using leading edge technology and is among the first bibliographic CD-ROM products published in India.

Prof. Partha Natha Mukherjee, Director, TISS in his keynote address at the release function, emphasized the need for academic organizations to pool their resources to enhance access to information. He also suggested that libraries & information centers consider ways of establishing bibliographical control over the publications produced by NGOs, volunteer groups and other organizations involved actively at the grassroot level, which though valuable for research, remain outside the mainstream collections. A symbolic relationship between librarians & social scientists was essential in improving bibliographic support for researches.

Mr. Krishna Raj spoke of the

overwhelming changes brought about by technology in the information scene. He congratulated the University for working with Pioneer Infovision & taking the lead in publishing bibliographic CD-ROMs in India and looked forward to more indigenous CD-ROMs being made available for the Indian academic community.

Ms. Harsha Parekh, University Librarian, in her welcome address, referred to trends in the globalization and digitization of library services. Mr. Sanjay Patil, CEO, of Pioneer Infovision Technologies, Bombay gave a brief introduction to the various developmental aspects of the CD-ROM product & its future evolution into a comprehensive reference product line.

World Science Report

According to Unesco's World Science Report (1996), more than 25 per cent of the two million Indians who enter the science and technology stream are women, but three-quarters of them leave after the first degree.

The report poses two key questions: science by whom and science for whom? It provides data and information on women's participation in scientific and technological education and analyses the range of obstacles to equal opportunities for women in science and technology.

Also, the biennial report examines the impact of technological change on their lives and explores their role in traditional knowledge systems.

In India, pure science and medicine have consistently ranked high among women's preferences and nearly 88 per cent of science degree holders are

in pure science with eight per cent in medicine and a little under three per cent in engineering and technology.

Within science, women tend to choose biosciences and chemistry. In engineering, electronic and electrical engineering and in technological courses — Pharmaceutical technology.

The only stream where women continue into advanced studies is medicine, but even there they stick to obstetrics, gynaecology, paediatrics, pharmacology, bacteriology or pathology, speech and hearing therapy, physiotherapy or dentistry.

Nearly two-thirds of the women scientists and technologists are engaged in teaching and another one fifth in administrative work, says the report.

Only three per cent are in research and development and they have an insignificant presence in such technical jobs as quality testing, operation, maintenance and industrial production and in higher managerial positions.

The report demonstrates that beyond obvious inequity of access to education and careers for girls and women in science and technology, its benefits are not equally shared.

Training Programme on Education Technology

A comprehensive Faculty Training and Development Programme in 'Education Technology' was recently organised at the Sri Padmavati Mahila Visvavidyalayam, Tirupati in collaboration with National Academy of Agricultural Research and Management (NAARM), Hyderabad. The programme was inaugurated by

Dr. Jagdeesh C. Kalla, Director, NAARM. The Programme dealt with various aspects ranging from Curriculum Design and Development, Lesson Planning, Time Management, Learning Management to Motivational Approaches and Personality Development of teachers. Management aspects relating to the Educational institutions were included in order to specify and define broad concepts of management and their relevance to the teachers. It also concentrated on promoting computers and video as instructional carriers and developed concept and hands on practice in understanding the efficacy of these two media in both learning and teaching processes.

A detailed evaluation of the Programme revealed that the management related concepts had higher appeal and educational technology Resource utilization, time management etc were rated as useful and adequate.

Chair in Planning and Development

The Department of Economics at Punjabi University is reported to have been selected by the Planning Commission as one of the five departments in the country to institute a Chair in 'Planning and Development'. The commission has approved an endowment fund of Rs 30 lakh for the purpose.

Dr J.R. Gupta, Head of the department, said that this Chair had been sanctioned in recognition of the progress made by the department in the recent past. The UGC has already recognised the department as Department of Special Assistance (DSA). The UGC, after evaluating the department's academic and research

work, had sanctioned a grant of Rs 25 lakh for the next phase covering a period of five years.

Beginning with the academic session of 1995-96, the department has diversified its activities by starting a new job-oriented course of Master of Business Economics (MBE).

Seminar on University Finances

A one-day seminar on "University Finance — its problems and prospects" was organised by the Gauhati University Officers' Association. Inaugurating the seminar, Prof. H L. Duorah, Vice-Chancellor of the University, expressed the view that in addition

to the government grants the universities should also mobilize their own resources. He said that some foreign universities had done commendable works in this regard. He was confident that the seminar would throw some light in this direction.

The participants expressed serious concern at the acute financial crisis experienced by the Gauhati University for the last several years. Disbursement of month's salary was not the prime duty of the university, they felt. If the situation went in this way the academic growth of the university would be greatly stunted. They urged upon the university authorities to enhance the financial resources of the University.

News from Agricultural Universities

Livestock and Poultry Development

The Third Annual Conference of the Indian Association for the Advancement of Veterinary Research (IAAVR) and a National Symposium on 'Prospects of Livestock and Poultry Development in 21st Century' was held at Central Avian Research Institute (CARI), Izatnagar. Dr M.P. Singh, President IAAVR, presided.

Dr. Rishendra Verma, Founder Secretary, IAAVR, in his opening remarks, described the activities of the association and stressed the need to re-orient vital issues like education, employment and research. He emphasized that employment should not be age based and called for taking a unanimous view to publish papers in our own Indian journals for giving them recognition at home and abroad. He also point-

ed out that with the inception of Veterinary Universities, there was certainly a need for constituting the Indian Council of Veterinary Research.

Dr. S.C. Mohapatra, Director, CARI and Chairman of National Symposium felt that the galaxy of scientists gathered would offer an unique opportunity for bringing out important recommendations for the 21st century.

Inaugurating the symposium Dr. Kiran Singh, Director, Indian Veterinary Research Institute (IVRI), emphasised that with the available inputs to our animals, it would not be wise to call these animals as low producers. Credit went to our country for sustaining large diversity of animals, he said. The contribution to GDP by the animal husbandry in the agriculture could not be undermined

He believed in Gandhian Philosophy and small scale interventions were the right place where our technologies were needed. He appreciated the health cover given to the animals and the manpower developed by our veterinary colleges. However, still there was enough scope to improve the profession, he felt.

About 200 delegates comprising scientists, teachers, policy makers, research administrators, eminent scientists from different parts of the country participated in the symposium.

Technology for Weed Control

Dr. S. Arya, Vice-Chancellor of Chaudhary Charan Singh Haryana Agricultural University (CCSHAU) in a call to farmers emphasised restraint on the widely followed rice-wheat crop sequence for it was the major cause of the spread of weed *Phalaris Minor* (Kanki) responsible for yield loss of wheat from 30 to 100 per cent. He said that agronomists of the University had succeeded in detecting population of weed resistant to the herbicide Isoproturon, presently in vogue. To check the weed further, a shift in the existing cropping pattern was a must, he reiterated.

Dr. Arya also suggested reduction in the area under wheat by 20 per cent in a phased manner. He said besides diminishing the seed bank of the weed this practice would help in checking the receding water table in the rice-wheat belt of the state.

Dr. Arya was addressing the farmers and farm women after inaugurating the Kisan Mela organised by the Agronomy Department of the university. The

objective of the mela was to disseminate the alternate technology to the farmers for effective control of the weed that had spread in serious proportions in Kurukshetra, Karnal, Kaithal districts and parts of Ambala, Panipat, Jind and Hisar districts. The farmers suffered heavy losses from the weed every year.

A delegation of 15 nations, which happened to be on the campus, also attended the mela. The delegation had interactions with the farmers and was impressed with the method of technology transfer of the university. The

delegation comprised the agricultural extension personnel from countries like United Kingdom, Zambia, Botswana, Kenya, Uganda, Nigeria, Ghana, Tanzania, etc.

Dr. V.P. Singh, Director of Research, advised the farmers to grow barseem, potato, sugarcane, sunflower and vegetable in place of wheat.

The scientists held discussions with the farmers at the question-answer session and also took them round the demonstration plots laid with the latest technology.

News from Abroad

MSc in International Business

The European Academic Consortium for Management Studies proposes to introduce an MSc Programme in International Business. The programme incorporates new dimensions of international business competencies by educating individuals to handle the new complexities of the business world. It gives an understanding of the challenges and opportunities that result, and an appreciation of different approaches to managing them. It does this with an innovative, rigorous and challenging programme.

The programme once completed, would be accredited with the long established and internationally acknowledged Master of Science (MSc) degree, a sure standard of quality postgraduate achievement. This will be awarded by one of the institutions involved in the programme, all of which have records of excellence

in both research and teaching. A special certificate will also be awarded by all the institutions of Consortium acknowledging accomplishment of a unique international programme of study.

Further details may be obtained from . The MSc in International Business Programme Administrator, The European Academic Consortium for Management Studies, Faculty of Management & Organization, University of Groningen, P.O. Box, 800, 9700 AV Groningen, The Netherlands

We Congratulate

Dr. Shamshad Hussain who has taken over as Vice-Chancellor of Nalanda Open University, Patna.

Prof. Satish Dhawan, Member, Space Commission, the new Chancellor of Jawaharlal Nehru University, New Delhi.

BOOK REVIEW

Recommended Reading

J.L. Bansal*

R.C. Mehrotra and Ramesh K Arora, Editors. Education, Science and Human Values : Essays in Honour of Professor D.S. Kothari. New Delhi, Wiley Eastern Ltd., 1994. Pp viii + 424. Rs. 500.

The book *Education, Science and Human Values* contains essays in honour of Professor D S. Kothari and also few of the most well-known lectures and essays of Professor Kothari himself, besides a lucid introduction by the editors Professor R C Mehrotra and Professor Ramesh K Arora.

It contains reminiscences and reflections on his personality as an educationist, scientist, administrator, visionary, philosopher and above all a Gandhian who represented a rare synthesis of non-violence and science. In chapter 2, Acharya Tulsī writes that Prof Kothari was a deeply spiritual person who symbolized the virtues of renunciation, self-discipline, non covetousness and particularly incorruptibility.

His son Lalit K. Kothari in the Third Chapter narrates the simple life style of his father and his belief that science and religion are both enquiries into the nature of the ultimate reality. In subsequent chapters.

W.V Bhagwat, a childhood companion of Professor Kothari, recalls that he rarely met him in life and yet he was linked to him throughout his life by an unknown force. Laxmi Lal Joshi observes that Prof Kothari had mas-

tery over the *Bhagwad Gita* and he used to compare the *Vishad* of Arjun with the long period of agony experienced by Einstein just before the discovery of the theory of relativity.

J V Narlikar, while enumerating the contributions of Prof. Kothari, recalls the days of early germination of theoretical astrophysics in India and regards Prof Kothari and Dr Majumdar as the torch bearers of the flame lit by Meghnad Saha in the early 1920's.

N.S Nigam and V.R Thiruvengkatachar have observed that Prof Kothari built up the Govt of India's Defence Science Organisation and Defence Science Laboratory. The book entitled "Nuclear Explosions and their Effects" is his one of the very valuable contributions. While A. Nagarathan regards him the father of DRDO.

J.N Nanda has pointed out that since his relief from Govt. work, Prof. Kothari was devoting his energies to warning the world about the dangers of drift into nuclear violence. Balraj Bhatia observes that Prof. Kothari, in addition to his reputation as a highly renowned physicist, will be remembered as one of the greatest teachers the country has produced.

S.K. Dasani recalls his first impression about Prof. Kothari an epitome of nobility, peace and

equanimity. Simplicity reflected from every fibre of his being. To him science was an instrument of construction and not destruction.

To Kapila Vatsayayan Prof. Kothari wanted charts to be made, curricula to be developed, education to be modified, syllabi to be restructured — all with the single goal of balancing the outer and the inner, the life of matter and of spirit. P.J Lavakare writes about the thoughts of Prof. Kothari on education, science and peace with which he was concerned for a number of years. Prem Kripal has noted that Prof Kothari believed fervently that education should contribute to man's innate dignity which often suffered in the Indian society of traditional hierarchy and persisting poverty. In the views of K.L Chopra, Prof. Kothari was a giant lamp which radiated so much coherent light that any lamp in the vicinity got lit spontaneously.

S. Loknathan while talking about Prof. Kothari's book on "Nuclear Explosions and their Effects" and his lecture on "Atom and Self" says that the lesson of Prof. Kothari's life is not that the scientists should not live in an ivory tower, rather, that the ivory tower is synonymous with Humanity.

To P.K. Katti he was a teacher, guide and Philosopher. Prof Kothari had zeroed in on "The Development of Optics Technology and Night Vision Instruments for the indigenous Vijayanta battle tanks".

In the section on Education, Yuvacharya Mahapragya underlines that education can be regarded meaningful only when it fosters conciliation in the contradictions of social life, compassion in economic life and sacrifice in

*Visiting Professor, Bansathali Vidyapith, 12 Ratnapuri, Ajmer Road, Jaipur-302 006.

political life. M.S. Adiseshiah observes that if there is one monumental document that will continue to guide the direction and the spirit of educational development in India, it is the report of the National Education Commission which is popularly known as the "Kothari Commission Report". G.B.K. Hooja emphasises on the opening paragraph of this report viz. "The destiny of India is now being shaped in her classrooms. This, we believe, is no rhetoric. In a world based on science and technology, it is education that determines the level of prosperity, welfare and security of the people. On the quality and number of persons coming out of our schools and colleges will depend our success in the great enterprise of national reconstruction, the principal objective of which is to raise the standard of living of our people." Hooja further observes that if women are given their due privileges, regardless of caste, community, colour or creed, the stability and future of the nation may well be assured.

K. Gopalan suggests that technical education in India needs to be recognized. The nation will have to keep pace with the latest and ongoing developments in the areas of microelectronics, informatics, telematics, biotechnology, engineering design, material science, oceanography, instrumentation and space technology.

In the section on Science, S. Chandrasekhar, the eminent Nobel Laureate, in his essay dedicated to Prof. Kothari concludes that one's knowledge of the Physical Sciences is incomplete without a study of the Newton's *Principia* in the same way that one's knowledge of Literature is incomplete without a study of Shakespeare.

Gerald Holton's counsel is that problem directed research is

the need as well as the order of the day. An interdisciplinary approach is a must. Many physicists believe a synthesis of physics, chemistry, parts of biology, and medical research may be within reach in the not too distant future.

S.S. Ramaswamy in his essay on Science, Industry and Environment observes that the Indian planners, policy makers and entrepreneurs have unfortunately in their concern and enthusiasm for rapidly industrializing the country have ignored to ensure adequate safeguards against the side-effects of industrial development.

In the section devoted to Human Values, Larry Dossey, an ardent admirer of Prof. Kothari, believes that we should be cautious in placing too much reliance on modern physical theory as a guide in thinking about medical reality. He is of the view that Prof. Kothari's lecture on "Atom and Self" should be studied by anyone having any pretensions whatsoever as a scientist, physician or philosopher. In this landmark paper, Prof. Kothari states that when it comes to matters of the mind, physics may not be up to the job of providing us with a full description.

J.N. Kapur in his essay on Ethics and Norms in Science concludes that if we can give assurance to our young scientists that their good work will be rewarded and sycophancy will not pay, we can soon hope to get our rightful place in the world of science and technology and contribute our share to true scientific development.

A new world order which is literally struggling to be born would be an offspring of the union of moral and secular values and constitutional or legal norms blessed by a heightened religious sense of the unity of mankind, is the preamble to the

thesis of multicultural vision and values for a new world order, propounded by L.M. Singhvi.

R.P. Misra dwelling on the theme of integrating outer and inner spaces: Challenge to Science and Religion, which was one of the prime concerns of Prof. Kothari, quotes Bertrand Russell: "Man has no chance of survival if knowledge only remains knowledge but if he could transform knowledge into wisdom, he will not only survive, he will be able to ascend to greater and greater heights of achievements".

To Ramjee Singh at no time in human history was the movement for human rights so strong as today and yet it has never been more vulnerable to attack than today. To overcome this crisis the solution lies in the integration of science and spirituality. Drawing on Buddhist Scriptures, Mahesh Tiwari explains the phenomenon of peace and four sublime states associated with it.

The last section on Mind and Thought contains eight lectures and essays written by Prof. Kothari including his oft quoted paper on "Atom and Self". Every essay requires considerable concentration to unravel the continuous prose in which Prof. Kothari had written about the external world (E-World) and the internal world (I-World). To him moral experiments have the same place for the I-world, as physical experiments for the E-world. Without continuing experimentation and assessment, there can be no advancement either of the individual or of society. He quotes Einstein, "Science without religion is lame, religion without science is blind".

I am of the view that this book be recommended as a part of the curriculum on value oriented education and anyone who believes in it would not leave the book unless one reads from A to Z.

EDUCATION NEWS INDEX

A list of select articles and editorials on education from newspapers received in the AIU Library during March 1996

EDUCATIONAL PHILOSOPHY

- ONCE GREAT (Editorial). *The Statesman* 15.3.96.

EDUCATIONAL PSYCHOLOGY

Ameet Singh Students and exams *Deccan Chronicle* 6.3.96. Bhattacharjee, Swati High scores, higher stakes *The Telegraph* 12.3.96

Dhar, Sujoy When learning is fun *The Hindustan Times* 16.3.96.

Jagadisan, S. Moving into top gear *The Hindu* 16.3.96

Joshi, Uma Tackling juvenile delinquency. *The Tribune* 4.3.96

MACHISMO IS not only for schoolboys (Editorial). *The Pioneer* 31.3.96.

Narlikar, J V Learning and talent. In search of the elusive *The Times of India* 16.3.96

Kegunathan, Sudhamahi. India Developmental learning *The Hindustan Times* 16.3.96

Samir Prasad Intellectual's dirty soul *The Hindustan Times* 27.3.96.

Sarabjit Singh School-goers benefit from TV watching *The Tribune* 25.3.96

Sen, Ashish Kumar Take a break *The Hindustan Times* 19.3.96

Sen Gupta, M Developing divergent thinking abilities *The Hindu* 19.3.96

Sinha, Renu Deparession among school children *The Tribune* 25.3.96

Utley, Tom Your son is a nice boy in a class of his own *The Pioneer* 31.3.96

EDUCATIONAL SOCIOLOGY

Ahmed, Firoz Bakht Sorry plight of madarsas in India. *National Herald* 27.3.96

----- 'Madrasas not doing any good to pupils' *Patriot* 25.3.96

Beteille, Andre Mediating institutions *The Telegraph* 12.3.96

Kumar, Rajni Unequal and unfair. *The Hindustan Times* 5.3.96.

EDUCATIONAL POLICY & PLANNING

Karajagi, Gururaj Policy without planning. *Deccan Herald* 17.3.96.

Khullar, K K Missed opportunities. *The Pioneer* 25.3.96.

Kulkarni, S K. Maharashtra's new education policy Need for a comprehensive long term plan. *Free Press Journal* 27.3.96

EDUCATIONAL ADMINISTRATION

Ajit Kumar. Why courses are incomplete? *The Hindustan Times* 27.3.96.

Amrik Singh Corrosion from within. *Deccan Herald* 17.3.96.

----- Don't transfer teachers. *The Hindustan Times* 14.3.96.

Balasubramanian, N. Need for academic and organisational autonomy. *The Hindu* 19.3.96.

Eswara Reddi, Agarala Teachers recruitment in universities. *Ambiguous policies a boon to manipulating VCs* *Deccan Chronicle* 17.3.96.

Girmaji, Pushpa Varsity, board exam disputes are not under purview of CPA. *The Times of India* 25.3.96

HAS FOSSIL fraud ended? (Editorial) *The Tribune* 19.3.96

IMPROVING MEDICARE (Editorial). *Deccan Herald* 16.3.96

Mahajan, Krishan Teaching institutions answerable. *The Pioneer* 23.3.96

Mathew P M Training to be managers *Deccan Herald* 24.3.96

Mehta, Vrajendra Raj. 'Varsity education has become irrelevant' *The Pioneer* 3.3.96.

Prakash, Jeevan Is education a trade? *The Pioneer* 26.3.96

QUESTION PAPER scandal (Editorial). *Free Press Journal* 28.3.96

Raja Ganesan, D Consciousness of time' in education. *The Hindu* 26.3.96

Ravikanth Reddy, R Whose fault is it anyway? *Deccan Chronicle* 6.3.96

Somasiah, Malathi Quality control through accreditation. *The Economic Times* 23.3.96.

Tanwar, Raghuveendra The 'pretenders' network. *The Tribune* 3.3.96

WHAT'S IN a name? (Editorial) *Deccan Herald* 19.3.96.

EDUCATIONAL BUILDING

Meena, C K. Architect of St. Joseph's College *The Hindu* 31.3.96

EDUCATION & POLITICS

Venkateswaran, K. Politics in varsities. *The Hindu* 25.3.96

CURRICULUM

Kannan, L. An affront to the legacy? *The Hindu* 5.3.96

Srinivasan, K. Techniques to draw conics *The Hindu* 19.3.96

LANGUAGE & LANGUAGE POLICY

Arunachalam, Valli. The wealth of language. *The Hindu* 26.3.96.

SCIENCE EDUCATION

Rajan, Raghavachari National Science University A review. *The Hindu* 5.3.96

Ramachandran, R. Science audit: Is the CAG slipping up? *The Economic Times* 21.3.96.

Sanjay Dev. Learning science can be fun *Patriot* 31.3.96.

Subramanian, S K. Science & technology : Time to change approach. *The Hindu* 19.3.96

Valluri, S R. Science sans ethics : Need for self-regulation. *Indian Express* 28.3.96.

VOCATIONAL EDUCATION

Ahmed, Mohd Khalid. Management mania. *Deccan Chronicle* 27.3.96

Ambirajan, S. Business of business education. *The Economic Times* 19 3 96

Dass, Amrita. Acting as a profession. *The Pioneer* 11 3 96.

Dinesh Kumar. The reality about MBA. *The Pioneer* 18.3.96.

Edgerton, Lilly. Costa Rica . Teaching on the farm. *The Hindustan Times* 16.3.96.

Khullar, K K. Non-implementation of policy. *The Pioneer* 26.3.96.

Madhava Menon, N R. Law graduates . Hump on the road to destination. *The Hindu* 26 3.96

Pant, G N. Innumerable opportunities. *The Hindustan Times* 19 3 96

Puri, Ruchita. Boom time for art graduates. *The Times of India* 13 3 96.

Rastogi, Manju. Get a foreign MBA degree at home. *The Times of India* 13.3.96

Raza, Quamar. Teaching forest management. *The Pioneer* 4 3 96

Verma, Karan. Information age manager. *Indian Express* 2.3.96

DISTANCE EDUCATION

Parthasarathy, R. Education. The new system. *The Hindu* 26 3 96

Srinivasacharyulu, G. Open varsities for operational efficiency. *The Hindu* 26 3.96

TEACHERS & TEACHING

Agrawal, Damodar. Darshan do, guruji. *The Hindustan Times* 27 3 96.

Balakrishnan, G S. Teaching without text books. *The Hindu* 26.3.96

Nagappa, S. Training the teachers. *The Hindu* 5 3 96

Putty, Sudheendhra. Teachathon! *Deccan Chronicle* 13.3.96.

Rajput, J S. Teachers' training for inclusive schools. *The Hindu* 19.3.96

Roy, Damayanti. Teachers' petting. *The Telegraph* 21.3.96.

Singh, H M. NCTE directive causes ripples. *The Tribune* 18 3 96

Vijayaraghava Rao, B. The making of teachers. *Deccan Herald* 24.3.96

Yadav, J P. Unethical practice? *The Statesman* 3 3 96

COUNSELLING & GUIDANCE

Bhagat, Chetan. Career to the top. *The Pioneer* 11.3.96.

Bhattacharjee, Gargee. Examination hell. *The Telegraph* 23 3.96.

Chadha, Sushma. Helping to choose a career. *The Pioneer* 4 3 96.

Dave, Dipti. Teachers, counsellors and guides. *The Telegraph* 25.3.96

Dinesh Kumar. Finding the key to the right course. *The Telegraph* 11.3.96.

Kaul, Asha. Face interviews with confidence. *The Pioneer* 11.3.96.

Nandi, Subhalakshmi B. Catch 'em young. *The Statesman* 3.3.96.

EDUCATIONAL RESEARCH

Rai, A N. Sustainable research system. *The Hindu* 12.3.96

Vyasulu, Vinod. A pastime called research. *The Economic Times* 20.3.96

EDUCATIONAL TECHNOLOGY

Chandrashekar, S. Widening web for education. *The Economic Times* 10.3.96

Dhawan, S P. Revolution in education world. *The Tribune* 18 3.96

Kannan, M. Computer assisted teaching. *The Hindu* 12.3.96

Kapoor, Jagdeep. Zee TV's educational venture. *Free Press Journal* 17.3.96

Kent, Simon. Counting on the human touch. *Deccan Herald* 26 3 96

Nagaraj, Sudha. A heady mix of media. *The Pioneer* 30 3 96.

Shankar, Hema. Learning the computer gym. *The Pioneer* 12.3.96

Sharma, Sanchita. Wide-screen incentive. *Indian Express* 2.3.96

EDUCATIONAL EVALUATION

Arshi, Deba Jamal. Hell inside exam hall. *The Hindustan Times* 13.3.96

Basu, Dipankar. Elitism in higher education. *The Pioneer* 5 3 96.

Bhargava, Shail. Preparing for the examinations. *Patriot* 11.3.96

Harsharan, Meena. Handling 'examinitis'. *Deccan Chronicle* 17 3.96.

Kemp, Tom. A chip off the old block. *The Pioneer* 12 3 96

Kumar, Seema. Setting new standards. *The Hindustan Times* 5.3.96

Mukherjee, Ipsita. Sum of success. *The Telegraph* 18 3.96

Naikar, Basavaraj. Net in perspective. *The Hindu* 5 3 96

ECONOMICS OF EDUCATION

Agrawal, Damodar. Snags in privatising varsities. *The Pioneer* 26.3.96

Akki, Dinesh. B Tech but jobless. *Deccan Chronicle* 3 3 96

Gayatri, R and Joshi, Rahul. In place, and with the right tag. *The Economic Times* 22.3.96.

Nageshwar, K. State, market and education. *The Hindu* 5.3.96.

Pinto SJ, Ambrose. Do we need private universities? *Deccan Herald* 3.3.96.

Shrivastava, Girish. Importance of earning. *The Hindustan Times* 13.3.96.

Vijayaraghavan, R. Invest in education for sustained economic growth. *The Economic Times* 4.3.96.

LIBRARIES & BOOKS

Abdullah Haroon, M. Libraries : Time to take stock. *Deccan Chronicle* 13.3.96

Chandrashekar, S. The new current in education. *The Economic Times* 17.3.96

Mishra, Pankaj. The great literary delusion. *The Times of India* 10.3.96.

Nanda Kumar, N. From domination to dialogue. *The Hindu* 17.3.96

Noronha, Frederick. A book fair with prices unfair. *Deccan Herald* 17.3.96

Roy Chowdhury, Jayanta. Out from shelves, into the streets. *The Telegraph* 27.3.96

THE FUTURE for publishing (Editorial) *The Hindu* 21.3.96

STUDENTS & STUDENT ACTIVITIES

Fazli, Arash. The best days of my life. *Deccan Chronicle* 20.3.96

Godavarti, Srikanth. Winds of change. *Deccan Chronicle* 20.3.96.

SPECIAL EDUCATION

Khanna, Sapna. A special school for special children. *The Pioneer* 3.3.96

Minwalla, Shabnam. Helping the dyslexic child. *The Times of India* 17.3.96

Sangeeta. Teaching the mentally retarded. *The Pioneer* 26.3.96

Seabrook, Jeremy. A future for the handicapped. *The Pioneer* 5.3.96

Sen, Benita. In a class of their own. *The Economic Times* 3.3.96

WOMEN'S STUDIES

Atma Ram. Dealing with low female literacy rates. *Indian Express* 5.3.96

Bindra, Kamal Nain K. AMU seminar asks why women are not educated. *The Times of India* 19.3.96

Dutt, Shushmita. Investing in the girl child. *The Pioneer* 7.3.96

EXPLORING THE gender gap in quantitative fields (Editorial) *The Pioneer* 4.3.96

Khullar, K K. Achieve total female literacy. *The Pioneer* 5.3.96

Medhi, Kunja. Empowering women. Women's study centres. *The Assam Tribune* 8.3.96

ADULT EDUCATION

Chadha, Sushma. 'The literacy campaign has ushered in change in our lives'. *The Pioneer* 5.3.96.

Kanagasahai, S. Literacy rate in Pondicherry. *The Hindu* 12.3.96

ELEMENTARY & SECONDARY EDUCATION

Anand, Rita. Scandalous state. *The Statesman* 3.3.96

Behl, R K. Gender disparities conspicuous. *The Tribune* 11.3.96.

Chaturvedi, A K. Education 'shops' thriving. *The Pioneer* 25.3.96.

Parpan, Lara. Philippines. Pre-schooling can be fun. *The Hindustan Times* 16.3.96.

COMPARATIVE EDUCATION & AREA STUDIES

Subrahmanyam, G S. Europe calling. *Deccan Chronicle* 27.3.96

INTERNATIONAL COOPERATION

THE LEARNING revolution : Aces high (Editorial) *The Times of India* 10.3.96.

INSTITUTIONAL PROFILE

Gundappa, D V. Gokhale Institute, Bangalore. Towards responsible citizenship. *Deccan Herald* 2.3.96

Gupta, S L and Gupta, R L. IEC (India Education Centre Ltd) poised for a quantum leap. *The Economic Times* 22.3.96

Marathe, Kaumudi. World of academia, a wonderful structure, is Cama Institute, Mumbai. *The Times of India* 10.3.96

BANARAS HINDU UNIVERSITY

VARANASI - 221005

CORRIGENDUM

In reference to the advertisement regarding the U.E.T. 1996-97 (B.H.U. Entrance Tests 1996-97) earlier appeared during the last week of January, 1996 in the National/State/Local dailies — the clause related to age requirement be now read as "Maximum age 20 years as on 31.12.1996" in place of the earlier announcement about age "Between 17 and 20 years as on 31.12.1996"

The last date of the receipt of application from the candidates under this age category alone is now extended to April 30, 1996

REGISTRAR



SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY

"DYANTEERTH", VISHNUPURI, NANDED - 431603

Ref.: PG/CAMPUS/96-97

Date: April 10, 1996

CORRIGENDUM

"Refer advertisement No TP-3/95 and the corrigendum of 19.12.95 of this University, read as under lecturers' posts"

16 - NTI, 19 - SC, 21 - Open and 22 - V.J.

Interested candidates could send applications till 30.04.1996."

Dr. Vijay Khole
REGISTRAR



UNIVERSITY OF HYDERABAD
(Central University established under an Act of Parliament)
P.O. Central University, Hyderabad - 500046.

ADMISSION ANNOUNCEMENT 1996-97

The University will hold entrance tests for admission to various courses during 1996-97 from 26 June to 30 June 1996.

COURSES OF STUDIES: 1) **School of Humanities:** M.A., M.Phil. & Ph.D. in English, Philosophy, Hindi, Telugu, Urdu and Applied Linguistics; M.A. in Functional Hindi (Translation), M.Phil. in Translation Studies; M.Phil. and Ph.D. in Comparative Literature, P.G. Certificate/Diploma/Advanced Diploma in Chinese/Japanese (part-time evening courses), and Advanced Diploma in Telugu (for Non-Telugu speaking persons) 2) **School of Social Sciences:** M.A., M.Phil. & Ph.D. in Economics, History, Political Science, Sociology and Anthropology; M.Phil. and Ph.D. in Regional Studies. 3) **School of Chemistry:** M.Sc., M.Phil. (Chemistry/Chemical Education) & Ph.D. 4) **School of Life Sciences:** M.Sc. and Ph.D. in Biochemistry, Plant Sciences and Animal Sciences. 5) **School of Mathematics & Computer/Information Sciences:** a) **Mathematics and Statistics:** M.Sc., M.Phil. & Ph.D. in Mathematics/Applied Mathematics, Statistics-Operations Research b) **Computer/Information Sciences:** M.C.A., M.Tech. (Computer Science), M.Tech. (Artificial Intelligence) & Ph.D. 6) **School of Physics:** M.Sc. (Physics), M.Sc. (Electronics), M.Phil. & Ph.D. in Physics 7) **Sarojini Naidu School of Performing Arts, Fine Arts and Communication:** M.P.A. (Dance), M.P.A. (Theatre Arts), M.F.A. (Painting), M.A. in Communication, P.G. Diploma in Acting (part-time evening course) & Ph.D. in Communication and Folk Culture Studies

ENTRANCE EXAMINATIONS: Admissions are made on All India basis in order of merit taking into consideration the performance of the candidates at the written/oral test as prescribed in the Prospectus for 1996-97. The written examinations for all the courses will be held at Bangalore, Bhubaneswar, Cochin, Delhi, Hyderabad, Madras, Madurai, Pune, Tirupati, Vijayawada and Waltair. The University reserves the right to cancel any of these centres without assigning any reasons. The oral test for M.Tech., M.Phil. & Ph.D. programmes and for P.G. Courses offered by the S.N. School are scheduled to be held between 15th and 18th July '96 at Hyderabad. Candidates will have to appear for these examinations (both written & oral) at their own expense.

RESERVATION OF SEATS: In each course, 15% and 7.5% of the seats are reserved for SC and ST candidates respectively with a provision for interchangeability wherever necessary. 3% of the seats are reserved for physically handicapped candidates. Some relaxation in the prescribed percentage of marks is also provided.

For admission of foreign students, nominated candidates from the North Eastern states and some Union territories and weightage for excellence in sports and cultural activities at

state/national level, a reference may be made to Chapter 3 of the Prospectus.

ELIGIBILITY: Detailed information regarding minimum qualifications and other requirements for various courses is given in the Prospectus. Candidates whose results of the qualifying degree examination are awaited and also those who are due to appear in the final examination of the qualifying degree and expecting their results to be declared by 31st July, 1996 may be conditionally allowed to apply for admission and appear in the entrance examination. In case of their selection, they would be required to submit the result of the qualifying examination at the time of admission.

HOW TO APPLY: Prospectus for 1996-97 containing detailed instructions, eligibility criteria for admission to each course and application forms can be obtained: **IN PERSON:** from 25/04/1996 onwards either from the Academic Section, Administration Building, University Campus, Hyderabad-500046 or from "The Golden Threshold" premises at Nampally Station Road, Hyderabad-500 001, against cash payment of Rs. 75/- for the first set of one application form and prospectus and Rs. 25/- for each additional application form. **BY POST:** from the Asst. Registrar (Academic), University of Hyderabad, Central University P.O., Hyderabad - 500046, by sending a) requisition, b) one self-addressed slip, c) a crossed demand draft for Rs. 85/- drawn in favour of the Finance Officer, University of Hyderabad, on State Bank of India or Andhra Bank or Canara Bank payable at Hyderabad for the first set of one application form and Prospectus and Rs. 25/- for each additional application form. Normally, not more than three applications will be issued with one Prospectus.

Note: A separate application is required for each course. However, for the following courses one application for each set of courses as mentioned below is sufficient: i) M.Sc. Mathematics/Statistics, ii) M.Tech. (Computer Science, Artificial Intelligence), iii) M.Phil. Mathematics/Statistics iv) M.Sc. Physics/Electronics; v) M.Phil. in Chemistry/Chemical Education, and vi) Ph.D. in Maths/Statistics.

LAST DATE for receiving requisition

**for issue of application forms by post: 15/05/96
(WEDNESDAY)**

**LAST DATE for receiving completed 24/05/96
application forms: (FRIDAY)**

The University will not be responsible for any postal delay. Candidates are therefore advised to apply well in time.

**P. Murallikrishna
REGISTRAR**

Dated: April 10, 1996

MINISTRY OF HUMAN RESOURCE DEVELOPMENT (DEPARTMENT OF EDUCATION)

FRENCH GOVERNMENT SCHOLARSHIP 1996-97

Applications are invited in the prescribed format given below from Indian nationals for the award of two (2) French Government Scholarships for the year 1996-97 in Political Science and Economics, for Doctoral/Post Doctoral Research

Duration : 12 Months.

Value : (1) a stipend of 5400 French francs per month. (2) medical reimbursement will be made in accordance with existing French Government Scholarship regulations

Travelling Expenses : Air passage by economy class from Bombay/Delhi to Paris and back will be provided by the French Government

Academic Qualifications Required : The candidates must possess Master Degree/Ph D for Doctoral/Post-Doctoral Research respectively with 60% or above marks

French Language : Candidates having a good knowledge of French language will be given preference.

Placement : Applicants must have a letter of acceptance from a French University/research institute or centre at the time of interview.

Note :

- 1 The following documents must be attached with the application — (a) attested copy of the certificate certifying the date of birth (b) attested copies of all degrees/diplomas/certificates etc (c) Candidates must furnish a clear and precise programme of study/research. (d) A recent passport size photograph of the candidate must be affixed on the prescribed application form.
- 2 Application in the subject-field other than those specified above will not be considered
- 3 Candidates who have already been abroad for study research specialisation/training either on a scholarship or on their own for more than six months may apply if they have been in India for at least two consecutive years after their return from abroad
- 4 Applications of candidates who are at present abroad, will not be considered
- 5 Candidates should have sufficient knowledge of India and the donor country
- 6 Incomplete applications will not be considered
- 7 No correspondence will be made with candidates not selected for interview/scholarship
- 8 Canvassing in any form will be a disqualification
- 9 Candidates who are in employment must send their applications duly sponsored by their employers
- 10 No application will be entertained after the last date of receipt of applications
- 11 Applicants can obtain addresses of French Institutions by writing to the Director, Centre for Human Sciences, French Embassy, 2, Aurangzeb Road, New Delhi-110 001
- 12 No Application Forms are supplied by this Ministry

Candidates should send their applications to the Secretary, Department of Education, Ministry of Human Resource Development, A1/W3 Curzon Road Barracks, Kasturba Gandhi Marg, New Delhi-110 001 The last date of receipt of applications is 31st May, 1996.

PROFORMA FOR APPLICATION

- 1 Name of the Scholarship Scheme
- 2 (a) Subject, (b) Course Opted
- 3 Name of the Candidate (In Block letters) with full mailing address
- 4 Date of birth and the State to which the Candidate belongs
- 5 Whether member of SC/ST (A certificate from the competent authority should be attached)
- 6 Academic record starting from High School/Higher Secondary (Attested/Photostat copies of certificate to be attached)

Recent passport size photograph duly signed to be pasted here. Without photograph application will be considered incomplete

Name of the University/ Board/ Institute	Examination(s)	Year of passing	Division/class with position if any (In case no class is awarded and only grading is done the conversion formula may be mentioned)	Percentage of marks obtained and position if any	Subjects taken
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- 7 Details of professional practical training and research experience specifying the period and number of papers published/previous employment
- 8 Nature of the present employments with name and date of appointment/designation and the name and address of the employer
- 9 Have you been abroad? If so give full particulars of the country visited and the period of stay Also mention the date, month and year of return to India (purpose of visit also to be indicated)
- 10 Proposed programme of study/research and Training specifying the following — (i) The work at present engaged in, (ii) Nature and Programme of Study research/training desired, (500 words)
 - (a) Title of Study/Research
 - (b) Hypothesis/Objective of study
 - (c) Methodology (to be adopted)
 - (d) Institutions where such studies are being done
 - (e) Relevance of study in Indian academic context

Declaration: I certify that the foregoing information is correct and complete to the best of my knowledge and nothing has been concealed/distorted. I understand that if at any time I am found to have concealed/distorted any material information my Selections shall be liable to summary termination without notice and compensation

Place.
Date.

SIGNATURE OF CANDIDATE

davp 96/7



TATA INSTITUTE OF SOCIAL SCIENCES

(A Deemed University)

Post Box No. 8313 Deonar, Mumbai - 400088

INVITES applications for the following posts. Qualification/Experience requirements and pay scale are as prescribed by the University Grants Commission

I. READERS

- a) **Two posts in the DEPARTMENT OF PERSONNEL MANAGEMENT AND INDUSTRIAL RELATIONS:** Holding a Master's degree in Personnel Management and Industrial Relations OR a Master's degree or equivalent in Business/General Management with specialisation in Personnel Management and Industrial Relations OR Master's degree in Law with specialisation in Labour Laws OR a Master's degree in Economics/Sociology/ Psychology with specialisation in Industrial Economics/ Industrial Sociology/Industrial Psychology and a Ph D degree or equivalent published work in the same field.
- b) **One post in the UNIT FOR LABOUR STUDIES:** Holding a Master's degree in Law with specialisation in Labour Laws OR a Master's degree in Economics/Sociology/Psychology with specialisation in Labour Economics/Industrial Sociology/ Industrial Psychology with research experience in the labour related areas and a Ph.D degree or equivalent published work
- c) **One post in the DEPARTMENT OF CRIMINOLOGY AND CORRECTIONAL ADMINISTRATION:** Holding a Master's degree in Social Work with specialisation in Criminology and Correctional Administration OR in lieu of the Specialisation, work experience in the field, teaching, research, field action/ demonstration projects in the related area and a Ph D degree or equivalent published work in the same field
- d) **One post in the DEPARTMENT OF FAMILY AND CHILD WELFARE:** Holding a Master's degree in Social Work with specialisation in Family and Child Welfare OR in lieu of the specialisation, work experience in teaching, research and field action projects in the areas of Family and Child Welfare and a Ph D degree or equivalent published work in the same field
- e) **One post in the DEPARTMENT OF MEDICAL AND PSYCHIATRIC SOCIAL WORK:** Holding a Master's degree in Social Work with specialisation in Medical and Psychiatric Social Work OR in lieu of the specialisation work experience in teaching, research and field action projects in the areas of Medical and Psychiatric Social Work and a Ph D degree or equivalent published work, in the same field
- f) **One post in the DEPARTMENT OF EXTRA MURAL STUDIES:** Holding a Master's degree in Social Work and a Ph D degree or equivalent published work. Preference will be given to those who have experience in the area of training, with special emphasis on national and international training
- g) **One post in the DEPARTMENT OF RESEARCH METHODOLOGY:** Holding a Master's degree in Statistics/Social Work/ Sociology/Psychology with a formal training in research methodology, experience of teaching research methodology, and sound command over all aspects of Research Methodology, and a Ph D degree or equivalent published work in the related field

II. INTERNAL AUDITOR (One post, reserved for ST): The Candidate should have M Com degree with at least 55% of the marks and SAS examination pass. Eight years of experience as Auditor in Central/State Government or Central Un-

versities carrying a scale of pay of Rs 2200-4000. Age limit: Not above 50 years including 5 years' relaxation. In case a suitable person is not found at this level, the Institute may consider appointing a person as Assistant Internal Auditor in the pay scale of Rs 2200-4000 from among those who apply.

III. LECTURER

- a) **One post (reserved for SC) in the DEPARTMENT OF PERSONNEL MANAGEMENT AND INDUSTRIAL RELATIONS:** Holding a Master's degree in Personnel Management and Industrial Relations/ Social Sciences/Psychology/ Sociology/Economics or MBA with specialisation in Personnel Management and Industrial Relations or M A. in Law with specialisation in Labour Law. Two years of Academic/Industrial Experience is preferred.
- b) **One post in the DEPARTMENT OF URBAN AND RURAL COMMUNITY DEVELOPMENT:** Holding a Master's degree in Social Work with specialisation in Urban and Rural Community Development OR in lieu of the required specialisation work experience in Community Organisation/development or teaching or research in the same field
- c) **One post in the DEPARTMENT OF MEDICAL AND PSYCHIATRIC SOCIAL WORK:** Holding a Master's degree in Social Work with either specialisation in Medical and Psychiatric Social Work or M A degree in Social Work in a generic programme with field work or work experience, preferably for two years, in the field of health
- d) **Two posts in the DEPARTMENT OF SOCIAL WELFARE ADMINISTRATION:** Holding a Master's degree in Social Work with specialisation in Social Welfare Administration or Master's degree in Social Work in a generic programme with work experience preferably for two years in the field of rural development, tribal development, social welfare administration, or M A degree in Business Administration with specialisation in management of non-profit organisation or M A degree in Economics with specialisation in Political Economy

The prescribed application form, along with the details of qualifications, experience, etc., prescribed for the post can be obtained from the Assistant Registrar (Personnel), either in person between 10.30 a.m. & 1.00 p.m. and 1.30 p.m. & 2.00 p.m. on working days or by post, by sending an application for the same, along with a stamped (Rs 4.00) self-addressed envelope and application fee of Rs 150/- for Reader and Rs 100/- for Lecturer by Demand Draft drawn in favour of Tata Institute of Social Sciences, Bombay. However, those who are interested at the first instance, in obtaining separately the details of specialisations and other requirements for the posts can do so in person during the timings mentioned above or by sending a self-addressed stamped (Rs 4.00) envelope to the Assistant Registrar (Personnel). For SC/ST candidates the application form will be supplied free of cost on the production of valid caste certificate. Those candidates who had applied for the aforesaid posts during the period of last one year need not apply again.

The completed applications together with copies of certificates should reach the Assistant Registrar (Personnel) on or before 24.5.1996.

Dr. S.K. Bandyopadhyay
REGISTRAR

CLASSIFIED ADVERTISEMENTS

INDIAN INSTITUTE OF TECHNOLOGY, GUWAHATI

INSTITUTION OF ENGINEERS
BUILDING, PANBAZAR,
GUWAHATI-781001, INDIA

Advertisement No. IIT/A/R/6/96

Applications are invited for faculty positions as follows

Professor/Associate Professor/Asst. Professor

1. **Computer Science & Engineering:** Databases, Compilers, Networks, Software Engineering, Distributed Systems, Artificial Intelligence

2. **Electronics & Communication Engg.:** Microelectronics/VLSI, Communication Engineering/Telematics/Networks, Digital Signal Processing, Optical Communication, Instrumentation, Hardware Design

3. **Mechanical Engineering** Fluid Mechanics, Production, Thermal, CAD (Desirable exposure to instrumentation and control)

For Professorship, experience of setting up laboratories will be an advantage and expertise in specializations other than those mentioned for respective departments will also be considered

Assistant Professor

1. **Physics:** Solid State Physics/Photonics/Optoelectronics

2. **Chemistry:** Organic Chemistry with specialization in Synthesis/Polymers/Organometallic/Bio-organic Chemistry and/or other areas of organic chemistry

3. **Mathematics** Operation Research, Probability/Statistics/ Stochastic Processes, Numerical Analysis

Professor

Rs. 5100-150-5700-200-7300

Associate Professor

Rs. 4500-150-5700-200-6300

Assistant Professor

Rs. 3700-125-4950-150-5700

Minimum Qualification:

Ph.D with first class or equivalent at the preceding degree in the appropriate branch with a very good academic record throughout

Experience:

Professor: A minimum of 10 years of teaching/research/industrial experience

of which at least 5 years should be at the level of Assistant Professor/Associate Professor.

Associate Professor : A minimum of 8 years of teaching/research/industrial experience of which at least 3 years should be at the level of Assistant Professor.

Assistant Professor: At least 3 years of teaching/research/ industrial experience.

Professor of an Institute of national importance who is on the verge of retirement or has very recently retired may also apply for contract appointment.

Note Mere fulfilment of qualifications and experience requirement laid down does not entitle a candidate to be called for interview

Candidates are to apply in plain paper with complete bio-data including: date of birth, percentages of marks and division obtained in all degrees/diplomas starting from SSC or equivalent, full details of employment, research, consultancy, publications, name & address of three referees

Candidates should also send a recent photograph and copy or reprints of three of their most significant publications and a bank draft of Rs 30 00 payable to IIT Guwahati at Guwahati. SC/ST candidates are exempted from paying this fee. Candidates in Govt./Semi-govt./Institutes must apply through proper channel, however an advance copy may be sent. Candidates should arrange with the referees to send their reference letters directly to the undersigned. At least one of the referees must be from outside the Institute/Organisation where the candidate is currently working/obtained Ph.D. degree

Last date for receipt of completed application:

From candidates within India

10 May, 1996

From Indian Nationals Abroad

17 May, 1996

DEAN of ADMINISTRATION

TEL (0361) 521915/Fax : (0361) 521916/

e-mail doa @ iitg ernet in



माखनलाल चतुर्वेदी राष्ट्रीय पत्रकारिता विश्वविद्यालय

ई - 8, अरेरा कॉलोनी, पो.बो. आर एस. एन 60, भोपाल-16

फोन - 575307, 766659; फैक्स - 561970.

माखनलाल चतुर्वेदी राष्ट्रीय पत्रकारिता विश्वविद्यालय की स्थापना म.प्र. शासन द्वारा एक अधिनियम के अन्तर्गत की गई है। यह विश्वविद्यालय- पत्रकारिता, जनसंचार, जनसम्पर्क, पुस्तकालय तथा सूचना विज्ञान एवं कम्प्यूटर एप्लीकेशन्स विषयों के लिये शिक्षा, अध्ययन प्रशिक्षण एवं शोध केन्द्र के रूप में विकसित किया गया है।

विश्वविद्यालय में विभिन्न शैक्षणिक एवं अधिकारी संवर्ग के पदों पर संविदा/नियमित नियुक्ति के लिये योग्य उम्मीदवारों से आवेदन आमंत्रित है।

1. **प्राध्यापक** — (1) पत्रकारिता (2) पुस्तकालय तथा सूचना विज्ञान

2. **व्याख्याता** — (1) पत्रकारिता (2) जनसंचार (3) पुस्तकालय तथा सूचना विज्ञान (4) कम्प्यूटर एप्लीकेशन

उक्त पदों पर नियुक्ति संविदा पर की जायेगी। सेवा निवृत्त व्यक्ति भी आवेदन कर सकते हैं।

3. **पंजीयक** — 3700-5700 (नियमित वेतनमान पर)

उपरोक्त सभी पदों के लिये निर्धारित आवेदन पत्र एवं अर्हता सम्बन्धी विवरण प्राप्त करने के लिये 50/- रुपये का बैंक ड्राफ्ट जो विश्वविद्यालय के नाम से भोपाल में देय हो के साथ लिखें। भरे हुये आवेदन प्राप्त होने की अंतिम तिथि 20 मई 1996 है।

महानिदेशक

GURU JAMBHESHWAR UNIVERSITY, HISAR

Advt. No. 3/96

Applications are invited for the following posts on the prescribed form obtainable from the office of the Registrar on payment of Rs. 50/- in cash on counter, or through Demand Draft in favour of the Registrar accompanied by a self-addressed envelope of 9"x4" stamped for Rs. 8/- :

TEACHING POSTS FOR

PROFESSOR (Rs. 4500-7300)

M.Sc. Information Science & Technology=1, Master of Computer Application (MCA)=1, B.Tech. in Printing & Technology=1, MBA (International Business)=1, MBA (Marketing)=1, M.Sc. Artificial Intelligence=1, PG Diploma in Food Processing & Technology=1, PG Diploma in Actural Science & Insurance=1, M. Sc. Applied Physics = 1, M.A. Public Administration= 1, M.Sc. Laser Technology=1, Law=1, Applied Mathematics=1

READER (Rs 3700-5700)

M.Sc. Information & Technology=1, Master of Computer Science & Application (MCA)=1, B.Tech. in Printing Technology=1, M.A. Industrial Psychology=1, MBA (International Business)=1, MBA (Finance)=1, MBA (Marketing)=1, PG Diploma in Advertising=1, PG Diploma in Food Processing and Technology=1, M.Sc. Artificial Intelligence=1, M.Sc. Laser Technology=1, P.G. Diploma in Actural Science & Insurance=1, M.Sc. Applied Physics=1, Diploma in Acquaculture=1, M.A. Hindi=1, M.A. English=1, Law=2, M.A. Public Administration=1, Communication Management & Technology=2, MBA(G)=3, Business Economics=1, Applied Mathematics=1.

LECTURER (Rs 2200-4000)

M.Sc. Information Science & Technology=2, Master of Computer Science & Application=2, Computer Science & Engineering=3, B.Tech. in Printing Technology=2, MBA (International Business)=2, MBA (Finance)=2, MBA (Marketing)=2, M.A. Industrial Psychology=2, P.G. Diploma in Advertising=2, M.Sc. Artificial Intelligence=2, P.G. Diploma in Food Processing & Technology=2, M.Sc. Laser Technology=2, P.G. Diploma in Actural Science & Insurance=2, Communication Management & Technology=1, Business Eco-

nomics=1, M.Sc. Applied Physics=2, Diploma in Acquaculture=2, M.A. Public Administration=2, Law=2, M.A. Hindi=2, M.A. English=2, Certificate Course in Japanese, German, Chinese, Arabic, French & Russian=1 each.

NON-TEACHING POSTS

Director, Youth & Cultural Affairs=1 (Rs. 3700-5700), S.D.O. (Public Health)=1, (Rs. 2200-4000), Head Draftsman=1 (Rs. 1640-2900), Draftsman (Civil)=2 (Rs. 1400-2600).

Applications of the candidates (UGC qualifications for teaching posts) fulfilling qualifications as available with the application form for these posts accompanied by a demand draft of Rs. 200/- for Professor, Rs. 150/- for Reader and Rs. 100/- for Lecturer and also for non-teaching posts in favour of the Registrar, Guru Jambheshwar University, Hisar should reach the Assistant Registrar (Estt.) by 15.5.1996 through proper channel from those in employment. SC/ST/BC & ESM are exempted from the application fee. Age limit is 18 to 50 years. The number of posts can vary. The applications not on the prescribed form or incomplete applica-

tions or those received late after due date are liable to be rejected.

Vivek Joshi
REGISTRAR

THE COCHIN EDUCATION SOCIETY

COCHIN COLLEGE BUILDINGS KOCHI-2

Requires for the Cochin College, Lecturers in English with 55% marks in the subject at postgraduate level and a pass in the National Eligibility Test of UGC/CSIR. Postgraduates in English with 50% marks and above with B.Ed. degree are also considered as per Govt. directive. The recruitment is for teaching at the pre-degree level and the selected candidates will be eligible for States pay scale only. The candidates should not have completed 35 years on 1-1-96. Qualified candidates may apply in the prescribed form available from college office on payment of Rs. 100/- (Rs. 105/- if required by post). Last date for receipt of completed application is 10-5-96.

PRESIDENT

UNIVERSITY OF PUNE



Department of Communication Studies Course : Master of Communication Studies

(Specialisation : Video Production or Media Research)

Admission Notice - 1996-97

Applications are invited for admission to Two Year (Full Time) Degree Course of Master of Communication Studies (M.Cm.S)

1. Minimum Qualification : B.E./B.A./B.Com./B.Sc./
B. Journalism/Any Degree.
2. Last Date of Submission of Application Form : 7th June, 1996
3. Entrance Examination : 14th June, 1996
4. Time : 10.00 hrs. to 13.00 hrs
5. Venue : Dnyaneshwar Hall,
University of Pune, Pune 411 007
6. Examination Fee : Rs.150/- by Cash/D.D.
7. Those who apply for admission are eligible to appear for Entrance Examination. No separate call letter will be issued.

Application Forms/Prospectus (Syllabus) available in Publication Section, University of Pune, on payment to Rs. 100/- and if by Post send, D.D. of Rs. 110/- drawn in favour of Registrar, University of Pune 411 007.

Candidates appearing for final year degree examination eligible

Advt. No. : 08
Date : 4-4-96

Subhaschandra Bhosale
Registrar

**ST. XAVIER'S COLLEGE
VAIKOM
KOTHAVARA Pin-686 607**

WANTED

In the light of G.O M S No. 30/96/H.Edn dated 12/2/96 prescribing the qualification for Jr Lecturers (Pre-Degree) applications are invited for the following posts which had already been advertised. Those with the prescribed qualifications who had applied in response to our previous advertisement need not apply again

Teaching Staff

- | | | |
|-------------------------|-------------|-----|
| 1 English | - Open ment | (1) |
| 2. Physical Education - | " " | (1) |
| 3 Commerce | - " " | (1) |
| 4 History | - " " | (1) |

These posts are subject to sanction by Govt/Utty

Age Below 35 years of age on the 1st day of January 1996

Qualification: i Masters degree in the concerned subject at least 50% marks or its equivalent
ii B Ed degree

Application forms can be had from the Manager on payment of Rs 100/- by cash or Rs 110/- by M O

Apply within one month from the date of this publication

MANAGER

**Mahatma Gandhi Kashi
Vidyapith, Varanasi
Corrigendum**

Reference Advt No 1/1996-97 published in University News issue dated 15 April, 96 on Inner page two Amend to read as follows
For Post of Reader SI No 2 sub para (2) Other Backward Classes
Commerce - one post (on leave vacancy likely to be permanent)
Post of Lecturer SI No 3 is remodified as shown below

- | | |
|--|----------|
| (1) General Category — Sociology — | one post |
| (2) Other Backward Classes — English — | one post |

REGISTRAR

**DIOCESAN SOCIETY OF
EDUCATION'S
ROSARY COLLEGE OF
COMMERCE & ARTS
NAVELIM, SALCETE, GOA 403 707**

Applications are invited for the following posts:

- (1) Lecturer in Commerce & Accounts
- 2 Posts (Full Time)
- (2) Lecturer in Computer Science
- 1 Post (Full Time)
- (3) Lecturer in Sociology
- 1 Post (Lecture-Basis)
- (4) Lecturer in Economics
- 1 Post (Lecture-Basis)
- (5) Lecturer in English
- 1 Post (Lecture-Basis)
- (6) Lecturer in Business Law
- 1 Post (Lecture-Basis)
- (7) Lecturer in Konkani
- 1 Post (Part Time)
- (8) Lecturer in Hindi
- 1 Post (Lecture-Basis)

Essential Qualifications :

- 1) Master's degree in the relevant subject with atleast 55% marks or its equivalent grade and good academic record.
- 2) The candidates must have the Master's degree as well as the Bachelor's degree in the same subject for which he is being appointed
- 3) Candidates should have cleared the Eligibility Test for Lecturers conducted by UGC, CSIR or similar tests accredited by UGC. In case, candidates having passed the said Eligibility Test are not available candidates fulfilling other conditions would be considered for appointment on purely temporary basis.
- 4) All other requirements prescribed by UGC and Goa University
- 5) For Computer Science
a) First Class B.E./B.Tech in Computer Science or Electronics having consistently good academic record with two years experience of teaching/research/industry. In case candidates having passed GATE are not available or found suitable, candidates without GATE may be considered for temporary appointments.

OR

- b) M E /M Tech in Computer Science or Electronics with 55% marks and good academic record.
OR
- c) M.C A or M.Sc in Computer Science or Electronics with 55% marks and good academic record
OR
- d) M.Sc Statistics or Mathematics with 55% marks and good academic record with exposure to Computer Science
- 6) For the Post at Sr No 1 candidates with B Com + C A with five years professional experience and good academic record will also be considered

Desirable Qualifications .

Ph.D or M Phil and a regular student for graduation and postgraduation

Scale of Pay:

Rs 2200-75-2800-100-4000 and other admissible allowances Persons who are already employed shall send their applications through proper channel

Certified copies of statement of marks at all public examinations should be enclosed

The number of vacancies may change depending on the workload The right to fill up any of the above mentioned posts is reserved

Applications alongwith attested xerox copies of all certificates should reach the undersigned within 15 days from the date of publication of the advertisement

SECRETARY

**Goa Vidyaprasarak Mandal's
COLLEGE OF EDUCATION
POST BOX NO 139
PONDA GOA - 403 401**

Applications with full Bio-data are invited for the following posts so as to reach the Principal within 15 (fifteen) days from the date of publication of this advertisement for the year 1996-1997.

Applications must be accompanied by certified copies of marksheets of all the Examinations from SSC onwards. Those

already employed, shall forward their applications through proper channel.

CATEGORY OF THE POST : OPEN

Full Time Lecturer in Education
(Preferably with Methodology of teaching
Languages/Social Sciences) 1
Post.

Category of Post : Reserved for SC/ST
(advertised for the third time and only
SC/ST candidates need to apply).

Full time Lecturer in Education (with

Methodology of teaching Konkani) ---
1 Post.

QUALIFICATIONS :- As prescribed by
U.G.C./NCTE

Candidates applying for the above
posts must be citizens of India and have
passed the eligibility test for Lectureship
conducted by the UGC or a similar test
accredited by the UGC. However, if such
candidates are not available or found not
suitable, other candidates will be appoint-
ed on temporary basis and the appoint-

ment will not be confirmed till the candi-
date passes the Eligibility Test within the
stipulated period.

Scale of Pay : Rs. 2200-75-2800-100-4000
plus admissible allowances as per rules

Terms and conditions of service are those
laid down by Goa University/Directorate
of Education, Government of Goa and
other competent authorities.

Louis Vernal

PRINCIPAL



UNIVERSITY OF HYDERABAD

(Central University established under an Act of Parliament)
P.O. Central University, Hyderabad - 500046.

Special Admission Announcement for 1996-97

(MAINLY FOR THE ATTENTION OF SC/ST CANDIDATES)

In continuation of the Admission Announcement inviting applications for admission to various full-time Courses in M.A., M.Sc., M.C.A., M.P.A., M.F.A., M.Tech., M.Phil., Ph.D. and part-time evening P.G. Diploma in Acting & P.G. Certificate/Diploma/Advance Diploma courses in Chinese/Japanese Languages, Adv.Dip in Telugu during 1996-97, it is notified as follows:

i) 15% and 7.5% seats in each course are reserved for SC and ST candidates respectively with a provision for interchangeability, wherever necessary. ii) For admission to PG courses, viz M A , M Sc , M.C A , M.F A , M.P.A., and Diploma courses, a relaxation of 5% marks in the minimum eligibility condition for admission to a course will be provided. Further relaxation in the marks may also be provided to fill the vacant seats, if any. There will be no cut off point in the entrance examination for admission to these courses, iii) For admission to M Phil., M.Tech. and Ph.D., relaxation of 5% marks in the minimum eligibility condition (subject to a minimum of a second class) will be provided. Candidates are required to obtain a minimum of 35% marks in the entrance examination (i.e. written/oral test) for admission to M.Phil./M.Tech. (as against 50% for the open category) and 45% in the entrance test for Ph.D. (as against 55% for the open category); iv) 22.5% of the seats available in the University Hostels are reserved for them (15% for SC and 7.5% for ST); v) Subject to fulfilling the conditions prescribed, they may avail Post Matric Scholarships for SC/ST students for the period of their study, vi) Provision may also be made where considered necessary for conducting remedial courses in English and other subjects for the benefit of the candidates and vii) SC/ST candidates are exempted from the payment of Registration fee for the entrance test.

Application forms together with prospectus 1996-97 containing detailed instructions, including eligibility conditions for admission to each course/programme of study can be obtained. i) **IN PERSON**, Either from the Academic Section in the Campus, Hyderabad - 500046 or from "The Golden Threshold" premises at Nampally Station Road, Hyderabad-500 001, against cash payment of Rs. 75/- for each set of Prospectus and one application form (Rs. 25/- for each additional Application Form), from 25/04/96. ii) **BY POST**, From the Asst. Registrar (Academic), University of Hyderabad, Central University P.O., Hyderabad - 500046, by sending him (i) requisition, (ii) One Self-addressed Slip, (iii) Crossed Demand Draft for Rs. 85/- drawn in favour of the Finance Officer, University of Hyderabad, on State Bank of India or Andhra Bank or Canara Bank PAYABLE AT HYDERABAD for a set of one application form and prospectus and Rs. 25/- for each additional application form. Normally not more than 3 applications will be issued with one prospectus

LAST DATE FOR RECEIVING REQUISITION FOR APPLICATION FORM BY POST : 15/05/96
LAST DATE FOR RECEIVING COMPLETED APPLICATIONS : 24/05/96

Dated: April 15, 1996

P. Muralikrishna
REGISTRAR

Ministry of Human Resource Development
(Department of Education)
ES-4 Section

**CONFEDERATION OF BRITISH INDUSTRY
OVERSEAS SCHOLARSHIPS — 1996-97**

Applications, in the proforma given below, are invited from Indian nationals who are residing in India and working in Public Sector Undertakings/Organisations/Firms, particularly who have collaborative agreement with U.K. firms, for award of scholarships offered by the Confederation of British Industry (CBI), London, for practical work experience in the following subject-fields

- (1) Energy and Environment Management
- (2) Power Systems Engineering including Generation, Transmission and Distribution practices

These scholarships are for practical work experience attachments and not for advanced training as such, scholars are expected to work productively for the host company at graduate engineer level.

No. of nominations to be sent - Five

Duration 4-12 months

Value £7,392.00 per annum (£616.00 per month) Free from U.K. Govt. Income Tax and other statutory deductions

Passage Costs. (a) Under the CBI Overseas Scholarship Scheme for CBI authorities will meet the cost of Scholar's air fare to India at the end of their scholarships, provided the scholarship is for 6 months or longer. (b) The CBI authorities will no longer meet the cost of Scholar's air fare to U.K. Scholars or their employers as the case may be, will be required to confirm in writing their ability and willingness to meet this cost. (c) For Scholarships of less than 6 months duration the scholar or his employer will be required to meet the whole passage cost both ways

Minimum Qualifications (1) Uniformly good academic record, with a first class degree in the relevant subject-field. Applicant must speak and write English well. (2) Minimum of 2 years professional experience in Engineering as on 1.1.1996 in the concerned fields after obtaining Degree mentioned at (1) above. (Experience has to be supported by documentary evidence)

These awards are primarily intended for young professional Engineers and not for senior personnel or academic staff

Sponsorship Only those candidates who are sponsored by their Employers and will return to their jobs on completion of their training in U.K. and undertake to serve their employers for a minimum period of three years are eligible to apply. Preference will be given to candidates from Public Sector Undertakings and Firms viz. Bureau of Public Enterprises, Federation of Indian Chamber of Commerce and Industries and those which receive aid or have collaboration with industries or organisations in U.K.

Age Candidates should not be more than 33 years of age as on 1.1.96. However age is relaxable by two years in the case of SC/ST candidates

N.B. (i) A candidate may apply for only one subject of his or her choice. (ii) Only candidates with 60% marks and above at the qualifying level are eligible. Where grades are awarded exact percentage of marks and conversion formula of the University/Institution must be indicated. (iii) Applications in subject fields other than those specified in this advertisement will not be considered. (iv) Candidates who have already been abroad for studies/training or specialisation either on a scholarship or on their own, for a period exceeding six months are eligible to apply only if they have been in India for at least two consecutive years after their return from abroad. (v) Candidates should have sufficiently good knowledge of U.K. and India. (vi) Candidates who are staying abroad are not eligible to apply. (vii) As these scholarships are offered by a foreign Government application should be in English only. Mere fulfilment of requirements as laid down in the advertisement does not qualify a candidate for interview. Interview letters in a particular subject are sent only to the best candidates in order of merit after their applications are judged by a duly constituted Selection Committee of Experts. (viii) Application on plain paper in the prescribed format given below accompanied by all required documents (only attested photocopies to be enclosed) will only be considered. (ix) Candidates who do not possess the requisite qualifications and training and other conditions as mentioned above need not apply.

Candidates should apply for the above scholarships on a plain paper with a recent passport size photograph furnishing the following details/particulars to the Secretary to the Government of India, Ministry of Human Resource Development (Department of Education), External Scholarship Division, ES-4 Section, A1/W3 Curzon Road Barracks, Kasturba Gandhi Marg, New Delhi-110001, latest by 31st May, 1996. APPLICATIONS RECEIVED LATE WILL NOT BE ENTERTAINED

FORMAT OF APPLICATION

- 1) Name of the Scholarship Scheme
- 2) Subject (Indicate any one of the subjects given in the advertisement)
- 3) (i) Name of the Candidate
(in block letters) full mailing address with pin code and Tel No. (if any)
(ii) Full name of Father/Mother/Guardian
(iii) Marital Status
- 4) Date of Birth and the state to which the candidate belongs
- 5) Whether a member of SC/ST, if so, give full particulars
(A certificate from competent authority should be attached)
- 6) Academic record starting from High School/Higher Secondary onwards

Recent passport size photograph duly signed to be pasted here

Name of the University/Institution	Exam(s) passed	Year of passing	Division/Class with position if any*	Percentage of marks obtained	Subjects taken
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*In case no Division/Class is awarded and only grading is done, exact percentage of marks and conversion formula adopted may be mentioned

- 7) (a) Details of Professional/Practical training and research experience, specifying period and number of papers published
(b) Details of employment after obtaining requisite educational qualifications with date of employment and name of Employers

Name of Organisation/Firm/Industry where employed	Date of appointment	Date of leaving	Post/designation	Main duties	Scale of pay	Total pay	Reasons for leaving
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- 8) Name, designation and address of two referees who are acquainted with the work of the candidate
- 9) Have you been abroad? If so, give full particulars of the country and the period of stay. Also mention the date of return to India. (Purpose of visit also to be indicated)
- 10) Proposed programme of training specifying details on a separate sheet
- 11) Also specify
 - (i) The work at present engaged in,
 - (ii) future plans/prospects after the proposed training,
 - (iii) nature and programme of training desired,
 - (iv) how are these related to the technical or economic development of India? Please enclose a write-up of about 500 words in this behalf
- 12) Declaration

I certify that foregoing information is correct and complete to the best of my knowledge and nothing has been concealed/distorted. I understand that if at any time I am found to have concealed/distorted any material information my selection shall be liable to summary termination without notice and compensation

Place

(Signature of the candidate)

Date

NOTE : (1) Attested copies of all certificates regarding proof of age, qualification from Higher Secondary onwards must be attached with the application. (2) Candidates must send their application fully sponsored by their employers. However, advance applications will be considered provisionally provided received complete in all respects, pending sponsorship by employers

N.B. (The candidates called for interview shall be required to bring letters from their referees along with them) Incomplete applications and without sponsorship letters will not be entertained

Jamia Hamdard

(HAMDARD UNIVERSITY)
Hamdard Nagar, New Delhi-110 062.

ADMISSION NOTICE FOR THE SESSION 1996-97

Applications for admission to the courses mentioned below are invited from the eligible candidates on the prescribed admission form :-

MASTER'S COURSES

- 1 *M.Sc. in (a) Bio-Chemistry, (b) Environmental Botany & (c) Toxicology*
- 2 *M.D. in (a) Mualljat (Medicine) & (b) Ilmul Advia (Pharmacology)*
- 3 *M. Pharm. in (a) Pharmaceutics, (b) Pharmacology, (c) Pharmaceutical Chemistry & (d) Pharmacognosy and Phytochemistry*

BACHELOR'S/DIPLOMA COURSES (10+2 with Physics, Chemistry & Biology; 50% in aggregate for courses 1-4)

- 1 Bachelor in Pharmacy (B. Pharm.),
- 2 B.Sc. Nursing,
- 3 Bachelor in Unani Medicine & Surgery (B.U.M.S.),
- 4 Diploma in Pharmacy (D. Pharm.),
- 5 Diploma in Nursing & Midwifery - (10+2)

PRE-TIBB

Fazil (Deoband), Alim (Arabic) or Alimyat (Nadwa) or Farighul Tehsil from a Dars-e-Nizami Madrasah recognised by Jamia Hamdard

The request for "Bulletin of Information" and Admission Form may be sent to the Registrar alongwith a self-addressed envelope (10x12") with postage stamps worth Rs 15/- duly affixed and a crossed Bank Draft/IPO for RS.100/- drawn in favour of Jamia Hamdard, Hamdard Nagar, New Delhi payable at New Delhi. The application, complete in all respects along with the prescribed non-refundable fee in the form of a crossed Bank Draft/IPO drawn in favour of Jamia Hamdard, Hamdard Nagar, New Delhi may be sent to the Registrar of the University so as to reach him on or before June 7, 1996.

The "Bulletin of Information" and Admission Form may also be obtained on cash payment of Rs 100/- from the below mentioned centres from April 25, 1996:

- 1 The Reception Counter of Jamia Hamdard on any working day
- 2 City Centre (Jamia Hamdard), 35, Ferozeshah Road, New Delhi - 110 001.
- 3 Maktaba Jamia Limited, Urdu Bazar, Jama Masjid, Delhi - 110 006.
- 4 Business and Employment Bureau, Hamdard Building, Asaf Ali Road, New Delhi - 110 002
- 5 Friends Book House, Shamshad Market, A.M.U., Aligarh - 202 002.
- 6 Branch Office : Hamdard (wakf) Labs. Ashok Raj Path, Opp B.N. College, Bankipur, Patna - 800 004.

Registrar